

John & Kernick

FORM P1

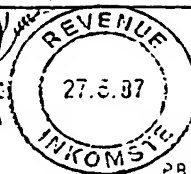
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REPUBLIC OF SOUTH AFRICA

PATENTS ACT, 1978

APPLICATION FOR A PATENT AND
ACKNOWLEDGEMENT OF RECEIPT

Section 30(1) - Regulation 39



REPUBLIEK VAN
SUID-AFRIKA
REPUBLIC OF
SOUTH AFRICA

344.00

PB.HR205

The grant of a Patent is hereby requested by the undermentioned
Applicant(s) on the present application filed in duplicate

01	Official application No. 873821	22	Lodging date 27th May, 1987	J&K Reference AP 26120/PJW
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71	Full Name(s) of applicants: BAYER AKTIENGESELLSCHAFT . A legal body organised and existing under the laws of the Federal Republic of Germany.
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	Address(es) of applicant(s) D-5090 Leverkusen, Germany.
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54	Title of Invention USE OF AMIDES FOR IMPROVING THE CROP PLANT TOLERANCE OF HERBICIDALLY ACTIVE SULPHONYLISO(THIO)UREA DERIVATIVES
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<input checked="" type="checkbox"/>	The applicant claims priority as set out in the accompanying form P2	
<input type="checkbox"/>	This application is for a Patent of Addition to Patent/Application No.	24 01
<input type="checkbox"/>	This application is a fresh application in terms of S 37 and based on application no.	21 01
	This application is accompanied by:	
<input type="checkbox"/>	1a A single copy of a provisional specification of _____ pages	
<input checked="" type="checkbox"/>	1b Two copies of a complete specification of 175 pages	
<input type="checkbox"/>	2a Informal drawings of _____ sheets	
<input type="checkbox"/>	2b Formal drawings of _____ sheets	
<input checked="" type="checkbox"/>	3. Publication particulars and abstract (form P8 in duplicate)	
<input type="checkbox"/>	4. A copy of Figure _____ of the drawings for the abstract	
<input checked="" type="checkbox"/>	5. Assignment of invention (from the Inventors) or other evidence of title	
<input checked="" type="checkbox"/>	6. Certified priority documents (1 documents)	
<input checked="" type="checkbox"/>	7. Translation of priority documents (1 documents)	
<input type="checkbox"/>	8. Assignment of priority rights	
<input type="checkbox"/>	9. A copy of the form P2 and the specification of S.A Patent Application	21 01
<input checked="" type="checkbox"/>	10. A declaration and power of attorney on form P3	
<input type="checkbox"/>	11. Request for ante-dating on form P4	
<input type="checkbox"/>	12. Request for classification on form P9	
<input type="checkbox"/>	13a Request for delay of acceptance on form P4	
<input type="checkbox"/>	13b	

74	Address for Service: JOHN & KERNICK, PRETORIA.
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Date **27th May, 1987**

For the Applicant

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COMPLETE SPECIFICATION

(Section 30(1) - Regulation 28)

21	01	Official application No.	22	Lodging date	J&K Reference
873821			27th May, 1987		AP 26120/PJW
51	International classification				
A01N					
71	Full Name(s) of Applicant(s)				
BAYER AKTIENGESELLSCHAFT . A legal body organised and existing under the laws of the Federal Republic of Germany.					
72	Full name(s) of Inventor(s)				
Theodor PFISTER, Dieter FEUCHT, Robert R. SCHMIDT					
54	Title of Invention				
USE OF AMIDES FOR IMPROVING THE CROP PLANT TOLERANCE OF HERBICIDALLY ACTIVE SULPHONYLISO(THIO)UREA DERIVATIVES					

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The invention relates to the use of known amides as antidotes for improving the crop plant tolerance of certain herbicidally active sulphonyliso(thio)urea derivatives.

5 The invention furthermore relates to new active compound combinations which consist of known amides and known herbicidally active sulphonyliso(thio)urea derivatives and have particularly good selectively herbicidal properties.

10 In the present connection, "antidotes" ("safeners") are to be understood as substances which are capable of specifically antagonizing the harmful effects of herbicides on crop plants, that is to say of protecting the crop plants, without thereby noticeably influencing the
15 herbicidal action on the weeds to be combated.

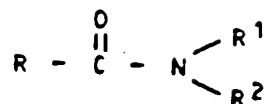
 It is known that numerous herbicidally active sulphonyliso(thio)urea derivatives cause damage to a greater or lesser degree on crop plants when used for combating weeds in maize and other crops.

20 It is furthermore known that numerous amides are suitable for reducing damage which can be caused to crop plants by herbicidal active compounds, in particular thiolcarbamates and acetanilides (compare, for example, DE-OS (German Published Specification) 2,218,097, DE-OS
25 (German Published Specification) 2,828,265, U.S. Patent Specification 4,021,224, U.S. Patent Specification 4,124,376 and U.S. Patent Specification 4,137,070).

 However, the applicability of these substances as antidotes depends to a large degree on the particular
30 herbicidal active compound.

 It has now been found that the known amides of the formula (1)

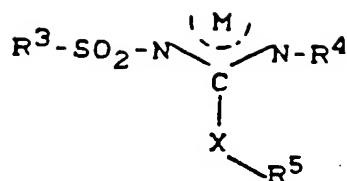
(I)



in which

R represents hydrogen or halogen, or represents in each case optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, bicycloalkyl, bicycloalkenyl, tricycloalkyl, aryl, heteroaryl, alkoxy, alkenyloxy, alkynyloxy, aryloxy, carbamoyl, alkoxycarbonyl or dithiolanyl and R¹ and R² independently of one another represent hydrogen, or represent formyl, or represent chlorosulphonyl, or represent in each case optionally substituted alkyl, alkenyl, alkadienyl, alkynyl, cycloalkyl, cycloalkenyl, alkoxy, alkylthio, alkylcarbonyl, alkoxycarbonyl, phenyl, phenoxy, phenylsulphonyl or heterocyclyl, or represent amino, or represent alkylideneimino, or represent optionally substituted alkylcarbonylamino or di-(alkylcarbonyl)amino, or R¹ and R², together with the nitrogen atom to which they are bonded, represent in each case optionally substituted alkylideneimino, pyrrolidinyl, piperidinyl, piperidonyl, perhydroazepinyl, perhydroazocinyl, dihydropyrazolyl, dihydro- or tetrahydropyridinyl, azabicyclononyl, morpholinyl, perhydro-1,3-oxazinyl, 1,3-oxazolidinyl, 1,4-piperazinyl, perhydro-1,4-diazepinyl, dihydro-, tetrahydro- or perhydroquinolyl or -isoquinolyl, indolyl or dihydro- or perhydroindolyl, are outstandingly suitable as antidotes for improving the crop plant tolerance of herbicidally active sulphonyliso-(thio)urea derivatives of the general formula (II)

(II)



in which

R^3 represents an optionally substituted radical from the series comprising alkyl, aralkyl, aryl and heteroaryl,

R^4 represents a six-membered aromatic heterocyclic radical which is optionally substituted and/or optionally fused and which contains at least one nitrogen atom,

R^5 represents an optionally substituted aliphatic, araliphatic, aromatic or heteroaromatic radical, X represents oxygen or sulphur and

M represents hydrogen or one equivalent of a metal, and of adducts of compounds of the formula (II) and strong acids.

It has furthermore been found that the new active compound combinations consisting of

- an amide of the formula (I) and
- at least one herbicidal sulphonyliso(thio)urea derivative of the formula (II)

are outstandingly suitable for selectively combating weeds in crops of useful plants.

Surprisingly, the crop plant tolerance of herbicidal sulphonyliso(thio)urea derivatives of the formula (II) is decidedly improved by also using amides of the formula (I). It is furthermore unexpected that the active compound combinations according to the invention of an amide of the formula (I) and a herbicidal sulphonyliso(thio)urea derivative of the formula (II) have better selective properties than the active compounds in question by themselves.

Formula (I) provides a general definition of the

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amides which can be used according to the invention. Preferred amides of the formula (I) are those in which

R represents hydrogen, fluorine, chlorine or

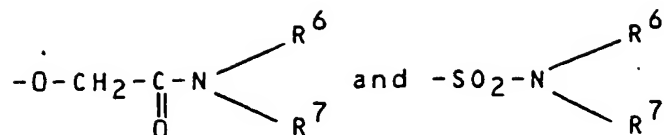
bromine; or represents the radical $\text{CO} - \text{N} \begin{matrix} \text{R}^7 \\ \text{R}^6 \end{matrix}$

wherein

R^6 and R^7 are identical or different and each represent hydrogen, or represent in each case straight-chain or branched alkyl, alkenyl, alkynyl or cyanoalkyl with in each case up to 8 carbon atoms; or furthermore

R represents straight-chain or branched alkyl which has 1 to 20 carbon atoms and is optionally monosubstituted or polysubstituted by identical or different substituents, possible substituents being: hydroxyl, halogen, in particular fluorine, chlorine, bromine or iodine, cyano, cyanato and thiocyanato; in each case straight-chain or branched alkoxy, alkylthio, alkylcarbonyl, alkylcarbonyloxy, alkoxy carbonyl, halogenoalkoxy, halogeno-hydroxy-alkoxy, halogenoalkylcarbonyl, halogenoalkoxy carbonyl, halogenoalkylcarbonyloxy and halogenoalkenylcarbonyloxy with in each case up to 6 carbon atoms and if appropriate up to 9 identical or different halogen atoms, in particular fluorine, chlorine or bromine; and also phenyl, phenoxy, phenylthio and thienyl, in each case optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising halogen, lower alkyl and/or lower alkoxy; and furthermore cycloalkyl with 3 to 7

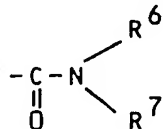
carbon atoms and the radicals $\text{N} \begin{matrix} \text{R}^6 \\ \text{R}^7 \end{matrix}$, $\text{C} \begin{matrix} \text{R}^6 \\ \text{O} \\ \text{R}^7 \end{matrix}$



wherein

R^6 and R^7 in each case have the abovementioned meanings; or furthermore

- 5 R represents straight-chain or branched alkenyl which has 2 to 8 carbon atoms and is optionally monosubstituted or polysubstituted by identical or different substituents, possible substituents being: hydroxyl, halogen, in particular fluorine, chlorine or bromine, straight-chain or branched
- 10 alkoxy carbonyl with up to 6 carbon atoms and phenyl and phenoxy, in each case optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising
- 15 halogen, in particular fluorine, chlorine or bromine, lower alkyl and lower alkoxy; or furthermore R represents straight-chain or branched alkynyl with 2 to 8 carbon atoms; or furthermore
- 20 R represents cycloalkyl, cycloalkenyl, bicycloalkyl, bicycloalkenyl or tricycloalkyl with in each case up to 12 carbon atoms and in each case optionally monosubstituted or polysubstituted by identical or different substituents, possible substituents being: straight-chain or branched alkyl
- 25 with 1 to 4 carbon atoms, phenyl and the radical



wherein

R^6 and R^7 have the abovementioned meaning; or furthermore

- 30 R represents aryl which has 6 to 10 carbon atoms and is optionally monosubstituted or polysubstituted by identical or different substituents,

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possible substituents being: halogen, in particular
fluorine, chlorine, bromine or iodine, nitro,
carboxyl - also in the form of the carboxylate
anion - in each case straight-chain or branched
alkyl, alkoxy, halogenoalkyl, alkylcarbonyl, halo-
genoalkylcarbonyl and halogenoalkylcarbonylamino
with in each case up to 4 carbon atoms and if
appropriate up to 5 identical or different halogen
atoms, in particular fluorine, chlorine or bromine,

and the radical $\text{-CO-N} \begin{matrix} \text{R}^6 \\ \text{R}^7 \end{matrix}$

wherein

R^6 and R^7 have the abovementioned meaning,
or furthermore
R represents furyl, thienyl, pyridyl or dithiol-
any, in each case optionally monosubstituted or
polysubstituted by identical or different sub-
stituents, possible substituents being: halogen,
in particular fluorine, chlorine or bromine,
straight-chain or branched alkyl with up to 6

carbon atoms and the radical $\text{-CO-N} \begin{matrix} \text{R}^6 \\ \text{R}^7 \end{matrix}$

wherein

R^6 and R^7 have the abovementioned meaning,
or finally
R represents in each case straight-chain or
branched alkoxy, alkenyloxy, alkinyloxy, alkoxy-
carbonyl or phenoxy, in each case optionally mono-
substituted or polysubstituted by identical or
different substituents from the group comprising
phenyl and halogen, in particular fluorine,
chlorine or bromine, and
 R^1 and R^2 , which are identical or different,
independently of one another, represent hydrogen,

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formyl or chlorosulphonyl, or represent phenyl, phenoxy or phenylsulphonyl, in each case optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising halogen, in particular fluorine, chlorine or bromine, and lower alkyl, or furthermore represent straight-chain or branched alkyl which has 1 to 12 carbon atoms and is optionally monosubstituted or polysubstituted by identical or different substituents, possible substituents being: hydroxyl, mercapto, cyano and halogen, in particular fluorine, chlorine, bromine or iodine; and in each case straight-chain or branched alkoxy, alkoximino, alkylcarbonyl, alkylcarbonyloxy, alkoxycarbonyl, alkoxycarbonyloxy, alkylthiocarbonyloxy, halogenoalkylcarbonyloxy and alkylsulphonyloxy with in each case up to 6 carbon atoms and, where appropriate, up to 5 identical or different halogen atoms, in particular fluorine, chlorine or bromine; and furthermore alkylaminocarbonyloxy, dialkylaminocarbonyloxy, alkenylaminocarbonyloxy and dialkenylaminocarbonyloxy with in each case up to 6 carbon atoms in the individual straight-chain or branched alkyl or alkenyl parts; and furthermore cycloalkylaminocarbonyloxy with 3 to 7 carbon atoms in the cycloalkyl part, and phenylaminocarbonyloxy which is optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising halogen, in particular fluorine, chlorine or bromine, and lower alkyl, and furthermore cycloalkyl which has 3 to 7 carbon atoms and is optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising halogen, in particular fluorine, chlorine or bromine, and lower alkyl, phenyl which

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is, optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising nitro, halogen, in particular fluorine, chlorine or bromine, lower alkyl and dioxyalkylene, furyl, tetrahydrofuryl, pyrazolyl, oxazolyl, isoxazolyl, thiazolyl, thiadiazolyl, oxadiazolyl, pyridyl and pyrimidinyl, in each case optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising halogen, in particular fluorine, chlorine or bromine, and lower alkyl, and amino which is optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising in each case lower alkyl, halogenoalkylcarbonyl, halogenophenoxyalkylcarbonyl and halogenoalkylcarbonylaminoalkyl; or furthermore

R^1 and R^2 represent straight-chain or branched alkenyl, alkadienyl or alkynyl with in each case 3 to 8 carbon atoms and in each case optionally monosubstituted or polysubstituted by identical or different substituents, possible substituents being: halogen, in particular fluorine, chlorine or bromine, cyano and in each case straight-chain or branched alkoxy, alkylcarbonyl and alkoxy-carbonyl with in each case up to 6 carbon atoms; or furthermore

R^1 and R^2 represent cycloalkyl or cycloalkenyl with in each case 3 to 8 carbon atoms and in each case optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising halogen, in particular fluorine, chlorine or bromine, and lower alkyl; or furthermore represent piperidyl, pyridyl, thienyl, oxazolyl, isoxazolyl, thiazolyl, oxadiazolyl, thiadiazolyl, fluorenyl, phthalimidoyl or dioxanyl, in

each case optionally monosubstituted or polysubstituted by identical or different substituents and/or benzo-fused, possible substituents being: halogen, in particular fluorine, chlorine or bromine, cyano and in each case straight-chain or branched alkyl and alkanediyl with in each case 1 to 4 carbon atoms; or furthermore R^1 and R^2 represent in each case straight-chain or branched alkoxy, alkylthio, alkylcarbonyl, alkoxy carbonyl, halogenoalkylcarbonyl or halogenoalkoxy carbonyl with in each case up to 6 carbon atoms and, where appropriate, up to 5 identical or different halogen atoms, in particular fluorine, chlorine or bromine; or furthermore R^1 and R^2 represent amino or alkylideneimino which is optionally monosubstituted or polysubstituted by identical or different substituents, possible substituents being: in each case straight-chain or branched alkyl, alkenyl, alkynyl, alkylcarbonyl and halogenoalkylcarbonyl with in each case up to 8 carbon atoms and, where appropriate, up to 5 identical or different halogen atoms, in particular fluorine, chlorine or bromine; or R^1 and R^2 , together with the nitrogen atom to which they are bonded, represent alkylideneamino, pyrrolidinyl, piperidinyl, piperidonyl, perhydroazepinyl, perhydroazocinyl, dihydropyrazolyl, dihydro- or tetrahydropyridyl, azabicyclononyl, morpholinyl, perhydro-1,3-oxazinyl, 1,3-oxazolidinyl, 1,4-piperazinyl, perhydro-1,4-diazepinyl, dihydro-, tetrahydro- or perhydroquinolyl or -isoquinolyl, indolyl or dihydro- or perhydroindolyl, in each case optionally monosubstituted or polysubstituted by identical or different substituents, possible substituents being: hydroxyl, halogen (in particular fluorine, chlorine or bromine),

cyano and formyl; and in each case straight-chain or branched, where appropriate divalent alkyl, alkanediyl, alkoxy, dioxyalkylene, alkylcarbonyl, alkoxycarbonyl and halogenoalkylcarbonyl with in
5 each case up to 8 carbon atoms, in each case straight-chain or branched alkylamino and dialkyl- amino with in each case up to 4 carbon atoms in the individual alkyl parts, phenyl, naphthyl, pyridyl and piperidinyl, in each case optionally
10 monosubstituted or polysubstituted by identical or different substituents from the group comprising halogen, in particular fluorine, chlorine or bromine, nitro and in each case lower alkyl, halogenoalkyl, alkoxy, alkylcarbonyl or alkoxy-
15 carbonyl, and straight-chain or branched cyclopropylalkyl, cyclohexylalkyl, piperidinylalkyl, phenylalkyl and phenylalkenyl with up to 4 carbon atoms in the particular alkyl or alkenyl parts and in each case optionally monosubstituted or poly-
20 substituted by identical or different substituents from the group comprising halogen, in particular fluorine, chlorine or bromine, lower alkyl and halogenoalkylcarbonyl.

Particularly preferred amides of the formula (I)
25 are those in which

R represents hydrogen or chlorine; or furthermore

R represents the radical $\text{-CO-N} \begin{matrix} \text{R}^6 \\ \text{R}^7 \end{matrix}$

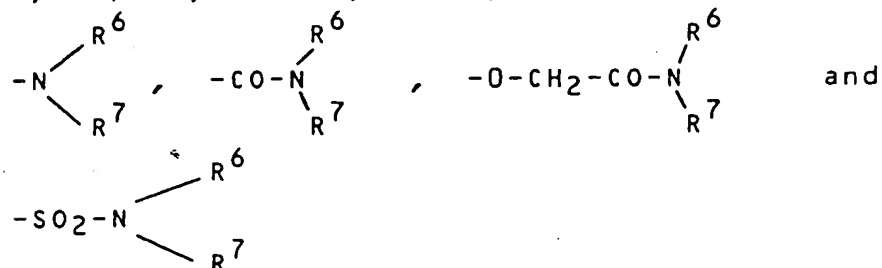
wherein
30 R^6 and R^7 are identical or different and independently of one another each represent hydrogen, methyl, ethyl, allyl, propargyl, but-1-in-3-yl, 3-methylbut-1-in-3-yl or 2-cyanoprop-2-yl; or furthermore

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R represents straight-chain or branched alkyl with up to 15 carbon atoms; or furthermore

R represents straight-chain or branched halogeno-alkyl with 1 to 6 carbon atoms and 1 to 9 identical or different halogen atoms, in particular fluorine, chlorine, bromine and iodine; or furthermore

R represents straight-chain or branched alkyl which has 1 to 6 carbon atoms and is mono-, di- or trisubstituted by identical or different substituents, possible substituents being: hydroxyl, fluorine, chlorine, bromine, cyano, cyanato, thiocyanato, methoxy, ethoxy, methylthio, ethylthio, acetyl, propionyl, acetoxo, propionyloxy, methoxycarbonyl, ethoxycarbonyl, 1,1,3,3-tetrachloro-2-hydroxyprop-2-yloxy, 1,1,1,3,3-pentachloro-2-hydroxyprop-2-yloxy, chloroacetyl, dichloroacetyl, chloroacetoxo, dichloroacetoxo, pentachlorobutadien-1-ylcarbonyloxy and phenyl, phenoxy, phenylthio and thienyl, in each case optionally mono-, di- or trisubstituted by identical or different substituents from the group comprising chlorine, methyl and methoxy; and furthermore cyclopropyl, cyclopentyl and cyclohexyl; and the radicals



wherein

R^6 and R^7 are identical or different and in each case independently of one another represent hydrogen, methyl, ethyl, allyl, propargyl, but-1-in-3-yl, 3-methyl-but-1-in-3-yl or 2-cyanoprop-2-yl; or furthermore

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R represents straight-chain or branched alkenyl which has 2 to 5 carbon atoms and is mono-, di- or trisubstituted by identical or different substituents, possible substituents being: hydroxyl, fluorine, chlorine, bromine, methoxycarbonyl, ethoxycarbonyl and phenyl and phenoxy, in each case optionally mono-, di- or trisubstituted by identical or different substituents from the group comprising fluorine, chlorine, methyl and methoxy; or furthermore

R represents straight-chain or branched alkynyl with 2 to 5 carbon atoms; or furthermore

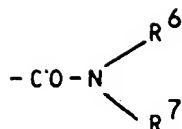
R represents cyclopropyl, cyclopentyl, cyclohexyl, cycloheptyl, cyclohexenyl, bicycloheptenyl, bicyclooctyl, bicyclononyl or tricyclodecyl, in each case optionally mono-, di-, tri-, tetra- or penta-substituted by identical or different substituents, possible substituents being: methyl, ethyl, phenyl

and the radical $\text{-CO-N} \begin{array}{l} \text{R}^6 \\ \text{R}^7 \end{array}$

wherein

R^6 and R^7 are identical or different and in each case independently of one another represent hydrogen, methyl, ethyl, allyl, propargyl, but-1-in-3-yl, 3-methylbut-1-in-3-yl or 2-cyanoprop-2-yl, or furthermore

R represents phenyl which is optionally mono-, di- or trisubstituted by identical or different substituents, possible substituents being: fluorine, chlorine, bromine, iodine, nitro, methyl, ethyl, methoxy, ethoxy, carboxyl - also in the form of the carboxylate anion -, trifluoromethyl, chloroacetamido, dichloroacetamido and the radical



wherein

R⁶ and R⁷ are identical or different and in each case independently of one another represent hydrogen, methyl, ethyl, allyl, propargyl, but-1-in-3-yl, 3-methylbut-1-in-3-yl or 2-cyanoprop-2-yl; or furthermore

R represents furyl, thienyl, pyridyl or dithiolanyl, in each case optionally mono-, di- or trisubstituted by identical or different substituents, possible substituents being: chlorine, methyl,



wherein

R⁶ and R⁷ are identical or different and in each case independently of one another represent hydrogen, methyl, ethyl, allyl, propargyl, but-1-in-3-yl, 3-methylbut-1-in-3-yl or 2-cyanoprop-2-yl; or finally

R represents methoxy, ethoxy, allyloxy, propargyloxy, butinyloxy, methoxycarbonyl, ethoxycarbonyl or phenyl, in each case optionally mono-, di- or trisubstituted by identical or different substituents from the group comprising fluorine, chlorine, bromine and phenyl, and

R¹ and R², which are identical or different, independently of one another represent hydrogen, formyl or chlorosulphonyl, or represent phenyl, phenoxy or phenylsulphonyl, in each case optionally mono-, di- or trisubstituted by identical or different substituents from the group comprising fluorine, chlorine, bromine or methyl; or furthermore represent straight-chain or branched alkyl

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which has 1 to 8 carbon atoms and is optionally
mono-, di- or trisubstituted by identical or
different substituents, possible substituents
being: hydroxyl, mercapto, cyano, fluorine,
5 chlorine, bromine, methoxy, ethoxy, propoxy,
butoxy, methoximino, ethoximino, acetyl, propionyl,
acetoxyl, propionyloxy, methoxycarbonyl, ethoxy-
carbonyl, methoxycarbonyloxy, ethoxycarbonyloxy,
methylthiocarbonyloxy, ethylthiocarbonyloxy,
10 chloroacetoxyl, dichloroacetoxyl, methylsulphonyloxy,
ethylsulphonyloxy, methylaminocarbonyloxy, di-
methylaminocarbonyloxy, ethylaminocarbonyloxy,
diethylaminocarbonyloxy, propylaminocarbonyloxy,
butylaminocarbonyloxy, allylaminocarbonyloxy, di-
15 allylaminocarbonyloxy and cyclohexylaminocarbonyl-
oxy, and phenylaminocarbonyloxy which is option-
ally mono-, di- or trisubstituted by identical or
different substituents from the group comprising
chlorine and methyl; and furthermore cyclopropyl,
20 cyclopentyl, cyclohexyl and cycloheptyl, in each
case optionally mono-, di-, tri-, tetra- or penta-
substituted by identical or different substituents
from the group comprising chlorine and methyl;
and phenyl which is optionally mono-, di- or tri-
25 substituted by identical or different substituents
from the group comprising nitro, fluorine, chlor-
ine, bromine, methyl and dioxymethylene, and
furyl, tetrahydrofuryl, pyrazolyl, oxazolyl,
isoxazolyl, thiazolyl, thiadiazolyl, oxadiazolyl,
30 pyridyl and pyrimidinyl, in each case optionally
mono- or disubstituted by identical or different
substituents from the group comprising methyl,
ethyl, propyl and chlorine; and amino which is
optionally monosubstituted or disubstituted by
35 identical or different substituents from the group
comprising methyl, ethyl, chloroacetyl, dichloro-

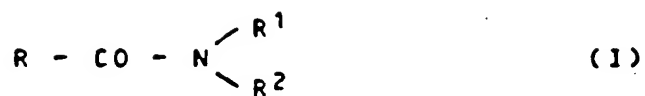
acetyl, chlorophenoxyacetyl, dichloroacetamido-
methyl and dichloroacetamidoethyl; or furthermore
R¹ and R² represent straight-chain or branched
alkenyl, alkadienyl or alkynyl with in each case
3 to 5 carbon atoms and in each case optionally
monosubstituted or disubstituted by identical or
different substituents from the group comprising
chlorine, methoxy, ethoxy, acetyl, methoxycarbon-
yl, ethoxycarbonyl or cyano; or furthermore
R¹ and R² represent cyclopropyl, cyclopentyl,
cyclohexyl, cyclohexenyl or cyclooctyl, in each
case optionally mono-, di-, tri-, tetra- or penta-
substituted by identical or different substituents
from the group comprising chlorine and methyl; or
furthermore
R¹ and R² represent piperidyl, pyridyl,
thienyl, oxazolyl, isoxazolyl, thiadiazolyl,
fluorenyl, phthalimidoyl or dioxanyl, in each case
optionally mono-, di- or trisubstituted by iden-
tical or different substituents from the group
comprising fluorine, chlorine, bromine, cyano,
methyl, ethyl, propyl, propanediyl and butanediyl
and/or benzo-fused; or furthermore
R¹ and R² represent methoxy, ethoxy, propoxy,
butoxy, methylthio, ethylthio, propylthio, butyl-
thio, acetyl, chloroacetyl, dichloroacetyl,
methoxycarbonyl, ethoxycarbonyl, chloroethoxycar-
bonyl or bromoethoxycarbonyl, and furthermore
R¹ and R² represent amino or propylideneimino,
optionally monosubstituted or disubstituted by
identical or different substituents from the group
comprising methyl, ethyl, allyl, propargyl,
acetyl, chloroacetyl and dichloroacetyl, or
R¹ and R², together with the nitrogen atom to
which they are bonded, represent methylideneimino,
ethylideneimino, propylideneimino, pyrrolidinyl,

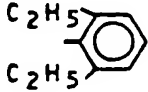
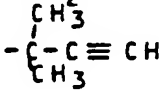
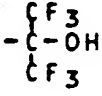


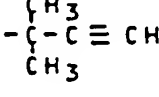
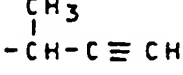
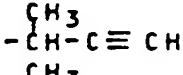
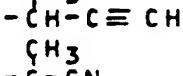
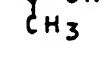
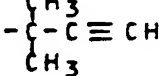
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piperidinyl, piperidonyl, perhydroazepinyl, perhydroazocinyl, dihydropyrazolyl, dihydro- or tetrahydropyridyl, azabicyclononyl, morpholinyl, perhydro-1,3-oxazinyl, 1,3-oxazolidinyl, 1,4-piperazinyl, perhydro-1,4-diazepinyl, dihydro-, tetrahydro- or perhydroquinolyl or -isoquinolyl, indolyl or dihydro- or perhydroindolyl, in each case optionally mono-, di-, tri-, tetra- or penta-substituted by identical or different substituents, possible substituents being: hydroxyl, fluorine, chlorine, bromine, cyano, formyl, methyl, ethyl, propyl, butyl, ethanediyl, propanediyl, methoxy, ethoxy, propoxy, butoxy, dioxyethylene, dioxypropylene, dioxybutylene, acetyl, propionyl, chloroacetyl, dichloroacetyl, α -chloropropionyl, methoxycarbonyl, ethoxycarbonyl, methylamino, ethylamino, dimethylamino, diethylamino and phenyl, naphthyl or piperidinyl, in each case optionally mono-, di- or trisubstituted by identical or different substituents from the group comprising fluorine, chlorine, bromine, nitro, methyl, ethyl, methoxy, ethoxy, trifluoromethyl, acetyl, propionyl, methoxycarbonyl and ethoxycarbonyl, and cyclopropylmethyl, cyclohexylmethyl, piperidinylethyl, piperidinylpropyl, benzyl, phenylethyl and phenylpropenyl, in each case optionally mono-, di- or trisubstituted by identical or different substituents from the group comprising chlorine, methyl, chloroacetyl and dichloroacetyl.

The terms "lower alkyl", "lower alkoxy" and the like in the context of this invention designate corresponding radicals with 1-4 C atoms. The following compounds of the general formula (I) may be mentioned specifically:

Table 1



Example No.	R	R ¹	R ²
I-1	H	H	
I-2	Cl	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-3	CH ₃	H	
I-4	CH ₃	H	
I-5	CH ₃	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-6	CH ₃		-SO ₂ - 
I-7	n-C ₃ H ₇	H	
I-8	n-C ₃ H ₇	CH ₃	
I-9	n-C ₃ H ₇	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-10	i-C ₃ H ₇	CH ₃	
I-11	n-C ₄ H ₉	H	
I-12	(CH ₃) ₃ C-CH ₂ -	H	
I-13	(CH ₃) ₃ C-CH ₂ -	CH ₃	

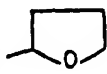
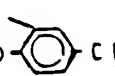
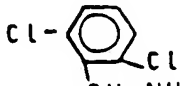
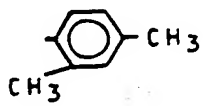
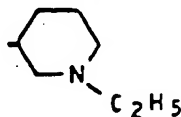
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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-14	$\text{CH}_3-(\text{CH}_2)_2-\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{H}$	H	$-\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{C}\equiv\text{CH}$
I-15	$\text{CH}_3-(\text{CH}_2)_2-\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{H}$	CH_3	$-\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{C}\equiv\text{CH}$
I-16	$\text{CH}_3-(\text{CH}_2)_2-\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{H}$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-17	$n\text{-C}_6\text{H}_{13}$	H	$-\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{C}\equiv\text{CH}$
I-18	$n\text{-C}_6\text{H}_{13}$	CH_3	$-\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{C}\equiv\text{CH}$
I-19	$n\text{-C}_6\text{H}_{13}$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-20	$\text{CH}_3-(\text{CH}_2)_2-\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{H}$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-21	$(\text{CH}_3)_3\text{C}-\text{CH}_2-\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{H}$	H	$-\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{C}\equiv\text{CH}$
I-22	$n\text{-C}_9\text{H}_{19}$	H	$-\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{C}\equiv\text{CH}$
I-23	$n\text{-C}_9\text{H}_{19}$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-24	$n\text{-C}_{11}\text{H}_{23}$	H	$-\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{C}\equiv\text{CH}$
I-25	$n\text{-C}_{11}\text{H}_{23}$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-26	$n\text{-C}_{13}\text{H}_{27}$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-27	$\text{Cl}-\text{CH}_2-$	H	$-\text{CH}_2-\text{CH}(\text{CH}_3)_2$
I-28	$\text{Cl}-\text{CH}_2-$	H	$-\text{C}(\text{CH}_3)_3$


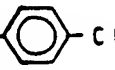
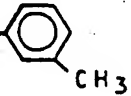

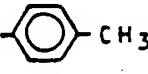
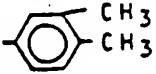
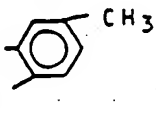

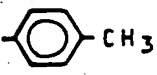
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Table 1 (Continuation)

Example No	R	R ¹	R ²
I-29	Cl-CH ₂ -	H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}_2\text{H}_5 \\ \\ \text{CH}_3 \end{array}$
I-30	Cl-CH ₂ -	H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{CH}_2-\text{CH}(\text{CH}_3)_2 \end{array}$
I-31	Cl-CH ₂ -	H	$\begin{array}{c} -\text{CH}_2-\text{C}=\text{CH}_2 \\ \\ \text{CH}_3 \end{array}$
I-32	Cl-CH ₂ -	H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-33	Cl-CH ₂ -	H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}_2\text{H}_5 \\ \\ \text{CN} \end{array}$
I-34	Cl-CH ₂ -	H	$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ -\text{C}-\text{C}_2\text{H}_5 \\ \\ \text{CN} \end{array}$
I-35	Cl-CH ₂ -	H	-CH ₂ CH ₂ -Br
I-36	Cl-CH ₂ -	H	-CH ₂ CH ₂ -OCH ₃
I-37	Cl-CH ₂ -	H	-CH ₂ -CH(OCH ₃) ₂
I-38	Cl-CH ₂ -	H	-CH ₂ - 
I-39	Cl-CH ₂ -	H	-CH ₂ -NH-CO-CH ₂ O- 
I-40	Cl-CH ₂ -	H	 -CH-NH-CO-CH ₂ Cl
I-41	Cl-CH ₂ -	H	
I-42	Cl-CH ₂ -	H	

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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-43	Cl-CH ₂ -	CH ₃	-CH(CH ₃) ₂
I-44	Cl-CH ₂ -	CH ₃	-(CH ₂) ₃ -CH ₃
I-45	Cl-CH ₂ -	CH ₃	-CH(CH ₃)-C ₂ H ₅
I-46	Cl-CH ₂ -	CH ₃	-CH(CH ₃)-CH(CH ₃) ₂
I-47	Cl-CH ₂ -	CH ₃	-CH ₂ -C≡CH
I-48	Cl-CH ₂ -	CH ₃	-CH(CH ₃)-C≡CH
I-49	Cl-CH ₂ -	CH ₃	-CH ₂ CH ₂ -CN
I-50	Cl-CH ₂ -	CH ₃	-CH ₂ - 
I-51	Cl-CH ₂ -	CH ₃	-CH ₂ - 
I-52	Cl-CH ₂ -	CH ₃	-CH ₂ - 
I-53	Cl-CH ₂	C ₂ H ₅	-CH(CH ₃)-C ₂ H ₅
I-54	Cl-CH ₂ -	C ₂ H ₅	-CH ₂ - 
I-55	Cl-CH ₂ -	C ₂ H ₅	-CH ₂ - 
I-56	Cl-CH ₂ -	C ₂ H ₅	-CH ₂ - 
I-57	Cl-CH ₂ -	C ₂ H ₅	-CH ₂ - 
I-58	Cl-CH ₂ -	C ₂ H ₅	
I-59	Cl-CH ₂ -	C ₂ H ₅	

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Table 1 (Continuation)











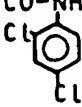
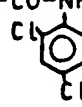
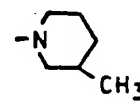
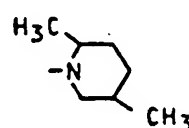
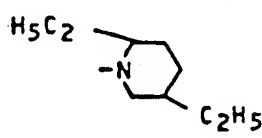
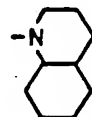
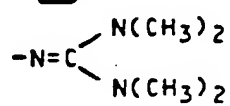
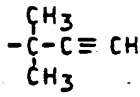
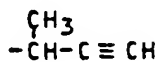
Example No.	R	R ¹	R ²
I-60	Cl-CH ₂ -	-CH ₂ CH ₂ CH ₃	-CH ₂ -CH(CH ₃) ₂
I-61	Cl-CH ₂ -	-CH ₂ CH ₂ CH ₃	-C(CH ₃) ₃
I-62	Cl-CH ₂ -	-CH ₂ CH ₂ CH ₃	-CH(CH ₃)-(CH ₂) ₂ -CH ₃
I-63	Cl-CH ₂ -	-CH ₂ CH ₂ CH ₃	-CH ₂ - 
I-64	Cl-CH ₂ -	-CH ₂ CH ₂ CH ₃	-CH ₂ - 
I-65	Cl-CH ₂ -	-CH ₂ CH ₂ CH ₃	-CH ₂ - 
I-66	Cl-CH ₂ -	-CH ₂ CH ₂ CH ₃	-CH ₂ - 
I-67	Cl-CH ₂ -	-CH ₂ CH ₂ CH ₃	-CH ₂ - 
I-68	Cl-CH ₂ -	-CH ₂ CH ₂ CH ₃	
I-69	Cl-CH ₂ -	-CH ₂ CH ₂ CH ₃	
I-70	Cl-CH ₂ -	-CH(CH ₃) ₂	-CH ₂ CH ₂ CH ₂ CH ₃
I-71	Cl-CH ₂ -	-CH(CH ₃) ₂	-CH(CH ₃)-C ₂ H ₅
I-72	Cl-CH ₂ -	-CH(CH ₃) ₂	-CH ₂ -CH(CH ₃) ₂
I-73	Cl-CH ₂ -	-CH(CH ₃) ₂	-(CH ₂) ₄ -CH ₃
I-74	Cl-CH ₂ -	-CH(CH ₃) ₂	-CH ₂ - 
I-75	Cl-CH ₂ -	-CH ₂ CH ₂ CH ₂ CH ₃	-CH ₂ CH ₂ CH ₂ CH ₃
I-76	Cl-CH ₂ -	-CH ₂ CH ₂ CH ₂ CH ₃	-CH ₂ -CH(CH ₃) ₂
I-77	Cl-CH ₂ -	-CH ₂ CH ₂ CH ₂ CH ₃	-CH=CH ₂
I-78	Cl-CH ₂ -	-CH(CH ₃)-C ₂ H ₅	-CH ₂ -CH(CH ₃) ₂
I-79	Cl-CH ₂ -	-(CH ₂) ₅ -CH ₃	-(CH ₂) ₅ -CH ₃
I-80	Cl-CH ₂ -	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂

Table 1 (Continuation)

Example No.	R	R ¹	R ² or $\begin{matrix} \text{R}^1 \\ \diagup \\ \text{N} \\ \diagdown \\ \text{R}^2 \end{matrix}$
I-81	Cl-CH ₂ -	-CH ₂ CH ₂ -OH	-CH ₂ CH ₂ -OH
I-82	Cl-CH ₂ -	-CH ₂ CH ₂ OCH ₃	-CH ₂ CH ₂ OCH ₃
I-83	Cl-CH ₂ -	-CH ₂ CH ₂ OC ₂ H ₅	-CH ₂ CH ₂ OC ₂ H ₅
I-84	Cl-CH ₂ -	-CH ₂ CH ₂ O-CO-NH-CH ₃	-CH ₂ CH ₂ O-CO-NH-CH ₃
I-85	Cl-CH ₂ -	-CH ₂ CH ₂ O-CO-NH-CH ₂ CH=CH ₂	-CH ₂ CH ₂ O-CO-NH-CH ₂ CH=CH ₂
I-86	Cl-CH ₂ -	-CH ₂ CH ₂ O-CO-NH- 	-CH ₂ CH ₂ O-CO-NH- 
I-87	Cl-CH ₂ -	-CH ₂ CH ₂ O-CO-NH- 	-CH ₂ CH ₂ O-CO-NH- 
I-88	Cl-CH ₂ -		
I-89	Cl-CH ₂ -		
I-90	Cl-CH ₂ -		
I-91	Cl-CH ₂ -		
I-92	Cl-CH ₂ -		
I-93	I-CH ₂ -	H	
I-94	I-CH ₂ -	CH ₃	
I-95	I-CH ₂ -	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂




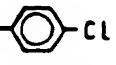
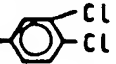
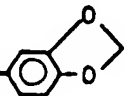







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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-96	Cl ₂ CH-	H	-CH ₂ -CH(CH ₃) ₂
I-97	Cl ₂ CH-	H	-C(CH ₃) ₃
I-98	Cl ₂ CH-	H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}_2\text{H}_5 \\ \\ \text{CH}_3 \end{array}$
I-99	Cl ₂ CH-	H	-CH ₂ -CH=CH ₂
I-100	Cl ₂ CH-	H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}_2-\text{C}=\text{CH}_2 \end{array}$
I-101	Cl ₂ CH-	H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-102	Cl ₂ CH-	H	-CH ₂ CH ₂ Br
I-103	Cl ₂ CH-	H	-CH ₂ CH ₂ OH
I-104	Cl ₂ CH-	H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}_2-\text{CH}-\text{OH} \end{array}$
I-105	Cl ₂ CH-	H	-CH ₂ CH ₂ CH ₂ -OH
I-106	Cl ₂ CH-	H	-CH ₂ CH ₂ -OC ₂ H ₅
I-107	Cl ₂ CH-	H	-CH ₂ CH ₂ CH ₂ -OCH(CH ₃) ₂
I-108	Cl ₂ CH-	H	$\begin{array}{c} \text{OC}_2\text{H}_5 \\ \diagup \\ -\text{CH}_2-\text{CH} \\ \diagdown \\ \text{OC}_2\text{H}_5 \end{array}$
I-109	Cl ₂ CH-	H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{CN} \\ \\ \text{C}_2\text{H}_5 \end{array}$
I-110	Cl ₂ CH-	H	$\begin{array}{c} \text{C}_2\text{H}_5 \\ \\ -\text{C}-\text{CN} \\ \\ \text{C}_2\text{H}_5 \end{array}$
I-111	Cl ₂ CH-	H	-CH ₂ CH ₂ -N(CH ₃) ₂
I-112	Cl ₂ CH-	H	-CH ₂ CH ₂ -N(C ₂ H ₅) ₂
I-113	Cl ₂ CH-	H	-CH ₂ CH ₂ -NH-CO-CHCl ₂
I-114	Cl ₂ CH-	H	-CH ₂ CH ₂ CH ₂ -NH-CO-CHCl ₂

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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-115	Cl ₂ CH-	H	-CH ₂ CH ₂ -N ^{C₂H₅} -CO-CHCl ₂
I-116	Cl ₂ CH-	H	-(CH ₂) ₃ -N-CO-CHCl ₂ (CH ₂) ₃ -NH-CO-CHCl ₂
I-117	Cl ₂ CH-	H	-CH ₂ - 
I-118	Cl ₂ CH-	H	-CH ₂ - 
I-119	Cl ₂ CH-	H	-CH ₂ - 
I-120	Cl ₂ CH-	H	-CH ₂ - 
I-121	Cl ₂ CH-	H	-CH ₂ - 
I-122	Cl ₂ CH-	H	-CH ₂ - 
I-123	Cl ₂ CH-	H	-CH ^{CH₃} - 
I-124	Cl ₂ CH-	H	-CH ₂ CH ₂ - 
I-125	Cl ₂ CH-	H	NH-CO-CH ₂ Cl -CH- 
I-126	Cl ₂ CH-	H	NH-CO-CH ₂ Cl -CH- 
I-127	Cl ₂ CH-	H	NH-CO-CHCl ₂ -CH- 
I-128	Cl ₂ CH-	H	NH-CO-CHCl ₂ -CH- 
I-129	Cl ₂ CH-	H	Cl -CH-  Cl NH-CO-CHCl ₂
I-130	Cl ₂ CH-	H	CH ₃ -C=CH-CN

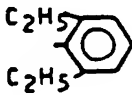
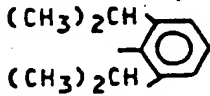

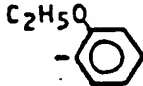
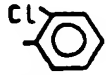
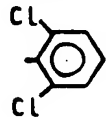
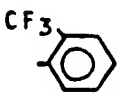
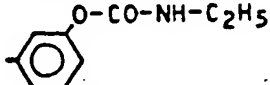
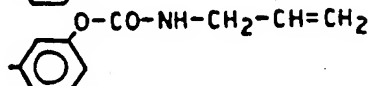
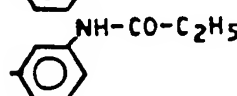
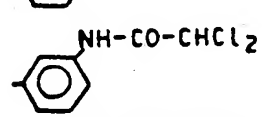
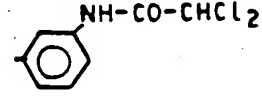

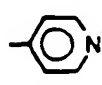
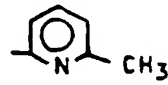
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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-131	Cl ₂ CH-	H	
I-132	Cl ₂ CH-	H	
I-133	Cl ₂ CH-	H	
I-134	Cl ₂ CH-	H	
I-135	Cl ₂ CH-	H	
I-136	Cl ₂ CH-	H	-CO-O-C ₂ H ₅
I-137	Cl ₂ CH-	H	-CO-O-CH ₂ CH ₂ Cl
I-138	Cl ₂ CH-	H	-NH-CO-CHCl ₂
I-139	Cl ₂ CH-	H	
I-140	Cl ₂ CH-	H	
I-141	Cl ₂ CH-	H	
I-142	Cl ₂ CH-	H	
I-143	Cl ₂ CH-	H	
I-144	Cl ₂ CH-	H	
I-145	Cl ₂ CH-	H	
I-146	Cl ₂ CH-	H	
I-147	Cl ₂ CH-	H	


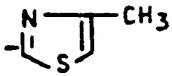
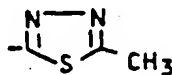
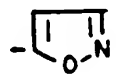
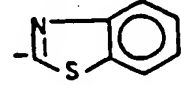
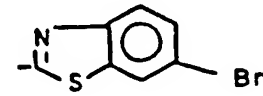
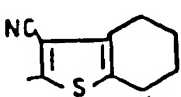
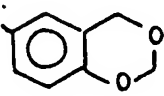
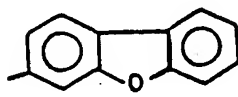
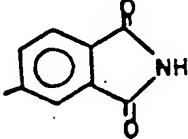
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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-148	Cl ₂ CH-	H	
I-149	Cl ₂ CH-	H	
I-150	Cl ₂ CH-	H	
I-151	Cl ₂ CH-	H	
I-152	Cl ₂ CH-	H	
I-153	Cl ₂ CH-	H	
I-154	Cl ₂ CH-	H	
I-155	Cl ₂ CH-	H	
I-156	Cl ₂ CH-	H	
I-157	Cl ₂ CH-	H	
I-158	Cl ₂ CH-	H	
I-159	Cl ₂ CH-	H	
I-160	Cl ₂ CH-	H	
I-161	Cl ₂ CH-	H	
I-162	Cl ₂ CH-	H	



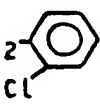
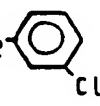
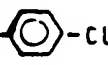
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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-163	Cl ₂ CH-	H	
I-164	Cl ₂ CH-	H	
I-165	Cl ₂ CH-	H	
I-166	Cl ₂ CH-	H	
I-167	Cl ₂ CH-	H	
I-168	Cl ₂ CH-	H	
I-169	Cl ₂ CH-	H	
I-170	Cl ₂ CH-	H	
I-171	Cl ₂ CH-	H	
I-172	Cl ₂ CH-	H	
I-173	Cl ₂ CH-	CH ₃	-CH ₃
I-174	Cl ₂ CH-	CH ₃	-CH ₂ CH ₂ CH ₃
I-175	Cl ₂ CH-	CH ₃	-CH(CH ₃) ₂
I-176	Cl ₂ CH-	CH ₃	-CH ₂ CH ₂ CH ₂ CH ₃
I-177	Cl ₂ CH-	CH ₃	-CH(CH ₃)CH ₂ CH ₃



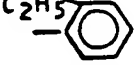
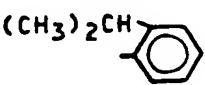
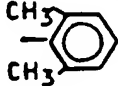
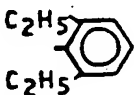
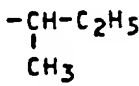
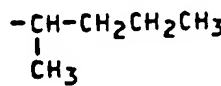
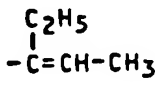
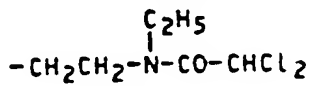

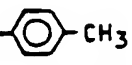
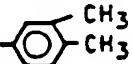
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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-178	Cl ₂ CH-	CH ₃	$\begin{array}{c} \text{-CH-(CH}_2\text{)}_2\text{-CH}_3 \\ \\ \text{CH}_3 \end{array}$
I-179	Cl ₂ CH-	CH ₃	$\begin{array}{cc} \text{-CH-} & \text{CH-CH}_3 \\ & \\ \text{CH}_3 & \text{CH}_3 \end{array}$
I-180	Cl ₂ CH-	CH ₃	-CH=C=CH_2
I-181	Cl ₂ CH-	CH ₃	$\text{-CH}_2\text{-C}\equiv\text{CH}$
I-182	Cl ₂ CH-	CH ₃	$\begin{array}{c} \text{-CH-C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-183	Cl ₂ CH-	CH ₃	$\text{-CH}_2\text{CH}_2\text{-OH}$
I-184	Cl ₂ CH-	CH ₃	$\text{-CH}_2\text{CH}_2\text{-CN}$
I-185	Cl ₂ CH-	CH ₃	$\begin{array}{c} \text{-(CH}_2\text{)}_2\text{-N-(CH}_2\text{)}_2\text{-N-CO-CHCl}_2 \\ \qquad \qquad \\ \text{CH}_3 \qquad \qquad \text{CH}_3 \end{array}$
I-186	Cl ₂ CH-	CH ₃	$\text{-CH}_2\text{-}$ 
I-187	Cl ₂ CH-	CH ₃	$\text{-CH}_2\text{-}$ 
I-188	Cl ₂ CH-	CH ₃	$\text{-CH}_2\text{-}$ 
I-189	Cl ₂ CH-	CH ₃	$\text{-CH}_2\text{-}$ 
I-190	Cl ₂ CH-	CH ₃	$\text{-CH}_2\text{-}$ 
I-191	Cl ₂ CH-	CH ₃	-NH_2
I-192	Cl ₂ CH-	CH ₃	$\begin{array}{c} \text{-N=C(CH}_3\text{)}_2 \\ \\ \text{CO-CHCl}_2 \end{array}$
I-193	Cl ₂ CH-	CH ₃	$\begin{array}{c} \text{-N} \\ \qquad \\ \text{CO-CHCl}_2 \quad \text{CO-CHCl}_2 \end{array}$

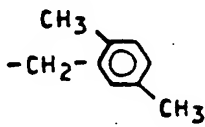
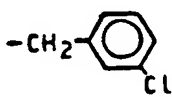

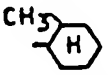
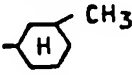
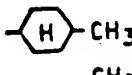
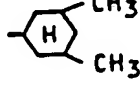

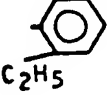
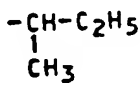
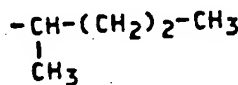
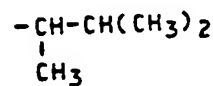
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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-194	Cl ₂ CH-	CH ₃	
I-195	Cl ₂ CH-	CH ₃	
I-196	Cl ₂ CH-	CH ₃	
I-197	Cl ₂ CH-	CH ₃	
I-198	Cl ₂ CH-	CH ₃	
I-199	Cl ₂ CH-	CH ₃	
I-200	Cl ₂ CH-	C ₂ H ₅	C ₂ H ₅
I-201	Cl ₂ CH-	C ₂ H ₅	-CH(CH ₃) ₂
I-202	Cl ₂ CH-	C ₂ H ₅	-CH ₂ CH ₂ CH ₂ CH ₃
I-203	Cl ₂ CH-	C ₂ H ₅	
I-204	Cl ₂ CH-	C ₂ H ₅	-CH ₂ -CH(CH ₃) ₂
I-205	Cl ₂ CH-	C ₂ H ₅	-C(CH ₃) ₃
I-206	Cl ₂ CH-	C ₂ H ₅	
I-207	Cl ₂ CH-	C ₂ H ₅	-(CH ₂) ₅ -CH ₃
I-208	Cl ₂ CH-	C ₂ H ₅	
I-209	Cl ₂ CH-	C ₂ H ₅	-CH ₂ CH ₂ -O-CO-CHCl ₂
I-210	Cl ₂ CH-	C ₂ H ₅	
I-211	Cl ₂ CH-	C ₂ H ₅	-CH ₂ - 
I-212	Cl ₂ CH-	C ₂ H ₅	-CH ₂ - 
I-213	Cl ₂ CH-	C ₂ H ₅	-CH ₂ - 


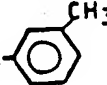
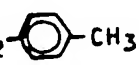
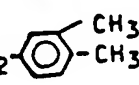
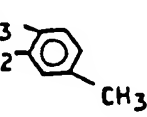
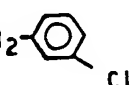
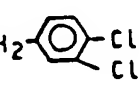
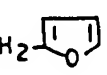

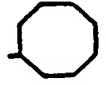

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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-214	Cl ₂ CH-	C ₂ H ₅	
I-215	Cl ₂ CH-	C ₂ H ₅	
I-216	Cl ₂ CH-	C ₂ H ₅	
I-217	Cl ₂ CH-	C ₂ H ₅	
I-218	Cl ₂ CH-	C ₂ H ₅	
I-219	Cl ₂ CH-	C ₂ H ₅	
I-220	Cl ₂ CH-	C ₂ H ₅	
I-221	Cl ₂ CH-	C ₂ H ₅	
I-222	Cl ₂ CH-	C ₂ H ₅	
I-223	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	-CH ₂ CH ₂ CH ₃
I-224	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	-CH ₂ CH ₂ CH ₂ CH ₃
I-225	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	
I-226	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	-CH ₂ -CH(CH ₃) ₂
I-227	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	-C(CH ₃) ₃
I-228	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	-(CH ₂) ₄ -CH ₃
I-229	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	
I-230	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	
I-231	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	-(CH ₂) ₅ -CH ₃






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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-232	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	-CH ₂ -CH=CH ₂
I-233	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	-C(CH ₃)=CH-C ₂ H ₅
I-234	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	-CH ₂ - 
I-235	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	-CH ₂ - 
I-236	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	-CH ₂ - 
I-237	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	-CH ₂ - 
I-238	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	-CH ₂ - 
I-239	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	-CH ₂ - 
I-240	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	-CH ₂ - 
I-241	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	-CH ₂ - 
I-242	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	-CH ₂ -C(Cl)=CH ₂
I-243	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	
I-244	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	
I-245	Cl ₂ CH-	CH ₃ CH ₂ CH ₂ -	
I-246	Cl ₂ CH-	(CH ₃) ₂ CH-	-CH(CH ₃) ₂
I-247	Cl ₂ CH-	(CH ₃) ₂ CH-	-CH ₂ CH ₂ CH ₂ CH ₃
I-248	Cl ₂ CH-	(CH ₃) ₂ CH-	-CH(CH ₃)-C ₂ H ₅

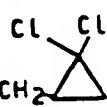


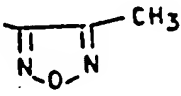
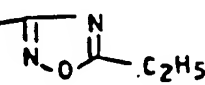
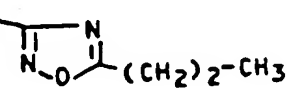

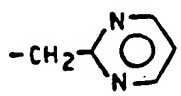
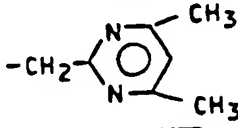

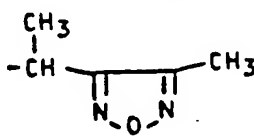
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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-249	Cl ₂ CH-	(CH ₃) ₂ CH-	-CH ₂ -CH(CH ₃) ₂
I-250	Cl ₂ CH-	(CH ₃) ₂ CH-	-(CH ₂) ₄ -CH ₃
I-251	Cl ₂ CH-	(CH ₃) ₂ CH-	-CH(CH ₃)-(CH ₂) ₂ -CH ₃
I-252	Cl ₂ CH-	(CH ₃) ₂ CH-	-CH ₂ -CH=CH ₂
I-253	Cl ₂ CH-	(CH ₃) ₂ CH-	-CH ₂ - 
I-254	Cl ₂ CH-	(CH ₃) ₂ CH-	
I-255	Cl ₂ CH-	n-C ₄ H ₉ -	-CH(CH ₃)-C ₂ H ₅
I-256	Cl ₂ CH-	n-C ₄ H ₉ -	-CH ₂ -CH(CH ₃) ₂
I-257	Cl ₂ CH-	n-C ₄ H ₉	-C(CH ₃) ₃
I-258	Cl ₂ CH-	n-C ₄ H ₉	-CH ₂ -CH=CH ₂
I-259	Cl ₂ CH-	n-C ₄ H ₉ -	-CH=CH-C ₂ H ₅
I-260	Cl ₂ CH-	CH ₃	-CH ₂ - 
I-261	Cl ₂ CH-	n-C ₄ H ₉ -	
I-262	Cl ₂ CH-	C ₂ H ₅ -CH(CH ₃)-	-CH ₂ -CH(CH ₃) ₂
I-263	Cl ₂ CH-	C ₂ H ₅ -CH(CH ₃)-	
I-264	Cl ₂ CH-	(CH ₃) ₂ CH-CH ₂ -	-CH ₂ -CH=CH ₂
I-265	Cl ₂ CH-	(CH ₃) ₂ CH-CH ₂ -	-CO-H
I-266	Cl ₂ CH-	(CH ₃) ₂ CH-CH ₂ -	-CO-CH ₃
I-267	Cl ₂ CH-	(CH ₃) ₂ CH-CH ₂ -	-CO-CHCl ₂
I-268	Cl ₂ CH-	(CH ₃) ₃ C-	-CH=CH-C ₂ H ₅
I-269	Cl ₂ CH-	(CH ₃) ₃ C-	-CH ₂ -CH ₂ -OH



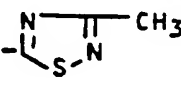
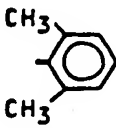
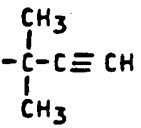
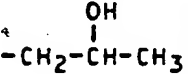
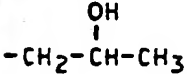
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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-270	Cl ₂ CH-	CH ₃ -(CH ₂) ₅ -	-(CH ₂) ₅ -CH ₃
I-271	Cl ₂ CH-	CH ₂ =CH-CH ₂ -	-CH ₂ -CH=CH ₂
I-272	Cl ₂ CH-	CH ₂ =CH-CH ₂ -	-CH ₂ -C(CH ₃)=CH ₂
I-273	Cl ₂ CH-	CH ₂ =CH-CH ₂ -	-CH ₂ -CH=N-OCH ₃
I-274	Cl ₂ CH-	CH ₂ =CH-CH ₂ -	-CH ₂ - 
I-275	Cl ₂ CH-	CH ₂ =CH-CH ₂ -	-CH ₂ - 
I-276	Cl ₂ CH-	CH ₂ =CH-CH ₂ -	-CH ₂ - 
I-277	Cl ₂ CH-	CH ₂ =CH-CH ₂ -	-CH ₂ - 
I-278	Cl ₂ CH-	CH ₂ =CH-CH ₂ -	-CH ₂ - 
I-279	Cl ₂ CH-	CH ₂ =CH-CH ₂ -	-CH ₂ - 
I-280	Cl ₂ CH-	CH ₂ =CH-CH ₂ -	-CH ₂ - 
I-281	Cl ₂ CH-	CH ₂ =CH-CH ₂ -	-CH ₂ - 
I-282	Cl ₂ CH-	CH ₂ =CH-CH ₂ -	-CH ₂ - 
I-283	Cl ₂ CH-	CH ₂ =CH-CH ₂ -	-CH ₂ CH ₂ - 
I-284	Cl ₂ CH-	CH ₂ =CH-CH ₂ -	-CH(CH ₃)- 

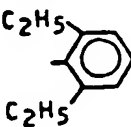
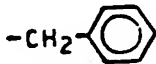

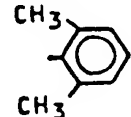
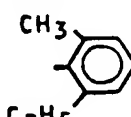
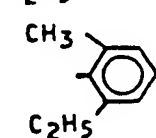
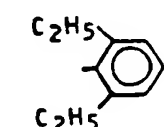

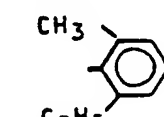

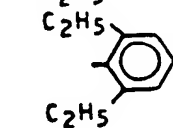
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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-285	Cl ₂ CH-	CH ₂ =CH-CH ₂ -	-CH ₂ -C(=CH ₂)Cl
I-286	Cl ₂ CH-	CH ₂ =CH-CH ₂ -	
I-287	Cl ₂ CH-	CH ₂ =CH-CH ₂ -	
I-288	Cl ₂ CH-	CH ₂ =CH-CH ₂ -	
I-289	Cl ₂ CH-	CH ₂ =C(CH ₃)-	
I-290	Cl ₂ CH-	C ₂ H ₅ -CH=CH-	
I-291	Cl ₂ CH-	H ₂ C=CH-CH ₂ -	-CH ₂ -CH(OCH ₃) ₂
I-292	Cl ₂ CH-	-CH ₂ -CN	-CH ₂ -CN
I-293	Cl ₂ CH-	-CH ₂ CH ₂ -CN	-CH ₂ CH ₂ -CN
I-294	Cl ₂ CH-	-CH ₂ CH ₂ -OH	-CH ₂ CH ₂ -OH
I-295	Cl ₂ CH-	-CH ₂ CH ₂ -Cl	-CH ₂ CH ₂ -Cl
I-296	Cl ₂ CH-	-CH ₂ CH ₂ OCH ₃	-CH ₂ CH ₂ OCH ₃
I-297	Cl ₂ CH-	-CH ₂ CH ₂ OC ₂ H ₅	-CH ₂ CH ₂ OC ₂ H ₅
I-298	Cl ₂ CH-		
I-299	Cl ₂ CH-	-(CH ₂) ₂ OCOC ₂ H ₅	-(CH ₂) ₂ OCOC ₂ H ₅
I-300	Cl ₂ CH-	-(CH ₂) ₂ OCOCHCl ₂	-(CH ₂) ₂ OCOCHCl ₂
I-301	Cl ₂ CH-	-(CH ₂) ₂ OCOOCH ₃	-(CH ₂) ₂ OCOOCH ₃
I-302	Cl ₂ CH-	-(CH ₂) ₂ OCOSC ₂ H ₅	-(CH ₂) ₂ OCOSC ₂ H ₅
I-303	Cl ₂ CH-	-(CH ₂) ₂ OCONHCH ₃	-(CH ₂) ₂ OCONHCH ₃

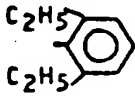
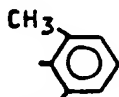
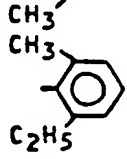
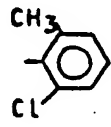
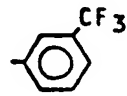
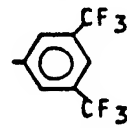
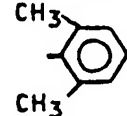
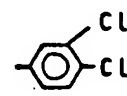
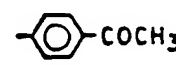

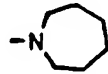
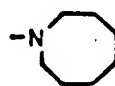
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Table 1 (Continuation)

Example R No.	R ¹	R ²
I-304	Cl ₂ CH-	-(CH ₂) ₂ OCON(CH ₃) ₂ -(CH ₂) ₂ OCON(CH ₃) ₂
I-305	Cl ₂ CH-	-(CH ₂) ₂ OCONHC ₂ H ₅ -(CH ₂) ₂ OCONHC ₂ H ₅
I-306	Cl ₂ CH-	-(CH ₂) ₂ OCONHCH(CH ₃) ₂ -(CH ₂) ₂ OCONHCH(CH ₃) ₂
I-307	Cl ₂ CH-	-(CH ₂) ₂ OCONH(CH ₂) ₃ CH ₃ -(CH ₂) ₂ OCONH(CH ₂) ₃ CH ₃
I-308	Cl ₂ CH-	-(CH ₂) ₂ OCONHCH ₂ CH=CH ₂ -(CH ₂) ₂ OCONHCH ₂ CH=CH ₂
I-309	Cl ₂ CH-	-(CH ₂) ₃ OSO ₂ CH ₃ -(CH ₂) ₂ OSO ₂ CH ₃
I-310	Cl ₂ CH-	-(CH ₂) ₃ NHCOCHCl ₂ -(CH ₂) ₃ NHCOCHCl ₂
I-311	Cl ₂ CH-	-CH ₂ OCH ₃ 
I-312	Cl ₂ CH-	-CH ₂ CH ₂ -SH 
I-313	Cl ₂ CH-	-CH ₂ CO-OC ₂ H ₅ 
I-314	Cl ₂ CH-	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{CO}-\text{OCH}_3 \end{array}$ 
I-315	Cl ₂ CH-	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{CO}-\text{OCH}_3 \end{array}$ 
I-316	Cl ₂ CH-	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{CO}-\text{OCH}_3 \end{array}$ 
I-317	Cl ₂ CH-	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{CO}-\text{OC}_2\text{H}_5 \end{array}$ 
I-318	Cl ₂ CH-	-CH ₂ -N  
I-319	Cl ₂ CH-	-CH ₂ -N  

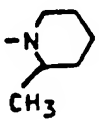
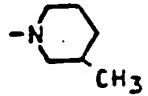
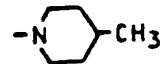
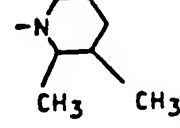
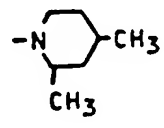
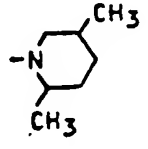
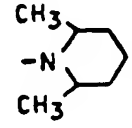
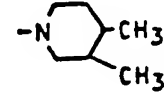
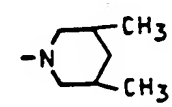
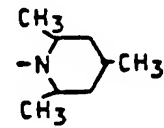
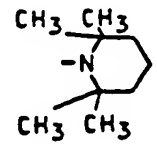
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Table 1 (Continuation)

Example No.	R	R ¹	R ² or $\begin{matrix} \text{R}^1 \\ \\ \text{---N---} \\ \\ \text{R}^2 \end{matrix}$
I-320	Cl ₂ CH-	$\begin{matrix} \text{---CH---CH}_2\text{---OCH}_3 \\ \\ \text{Cl---C=CH}_2 \end{matrix}$	
I-321	Cl ₂ CH-	$\begin{matrix} \text{CH}_3 \\ \\ \text{---C=CH---COCH}_3 \end{matrix}$	
I-322	Cl ₂ CH-	$\begin{matrix} \text{CH}_3 \\ \\ \text{---C=CH---COCH}_3 \end{matrix}$	
I-323	Cl ₂ CH-	$\begin{matrix} \text{CH}_3 \\ \\ \text{---C=CH---COCH}_3 \end{matrix}$	
I-324	Cl ₂ CH-	$\begin{matrix} \text{CH}_3 \\ \\ \text{---C=CH---COCH}_3 \end{matrix}$	
I-325	Cl ₂ CH-	$\begin{matrix} \text{CH}_3 \\ \\ \text{---C=CH---COCH}_3 \end{matrix}$	
I-326	Cl ₂ CH-	$\begin{matrix} \text{CH}_3 \\ \\ \text{---C=CHCOOC}_2\text{H}_5 \end{matrix}$	
I-327	Cl ₂ CH-	$\begin{matrix} \text{O} \\ \\ \text{---C---H} \end{matrix}$	
I-328	Cl ₂ CH-	---CO---CHCl_2	
I-329	Cl ₂ CH-		$\begin{matrix} \text{N(CH}_3)_2 \\ \\ \text{---N=C---} \\ \\ \text{N(CH}_3)_2 \end{matrix}$
I-330	Cl ₂ CH-		
I-331	Cl ₂ CH-		
I-332	Cl ₂ CH-		

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Table 1 (Continuation)

Example R No.	R ¹	R ²	or	$\begin{array}{c} \text{R}^1 \\ \\ -\text{N}- \\ \\ \text{R}^2 \end{array}$
I-333	Cl ₂ CH-			
I-334	Cl ₂ CH-			
I-335	Cl ₂ CH-			
I-336	Cl ₂ CH-			
I-337	Cl ₂ CH-			
I-338	Cl ₂ CH-			
I-339	Cl ₂ CH-			
I-340	Cl ₂ CH-			
I-341	Cl ₂ CH-			
I-342	Cl ₂ CH-			
I-343	Cl ₂ CH-			

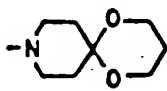
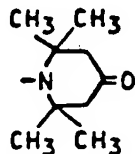
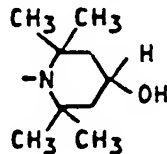
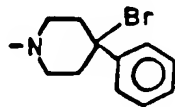
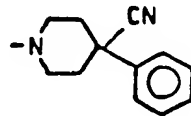
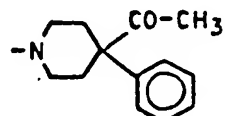
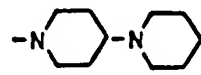
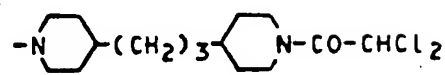
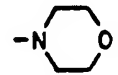
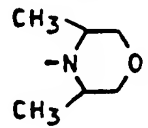
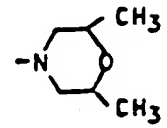
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Table 1 (Continuation)

Example No.	R	R ¹	R ²	or	$\begin{array}{c} \text{R}^1 \\ \diagup \\ \text{N} \\ \diagdown \\ \text{R}^2 \end{array}$
I-344	Cl ₂ CH-				
I-345	Cl ₂ CH-				
I-346	Cl ₂ CH-				
I-347	Cl ₂ CH-				
I-348	Cl ₂ CH-				
I-349	Cl ₂ CH-				
I-350	Cl ₂ CH-				
I-351	Cl ₂ CH-				
I-352	Cl ₂ CH-				
I-353	Cl ₂ CH-				
I-354	Cl ₂ CH-				
I-355	Cl ₂ CH-				
I-356	Cl ₂ CH-				

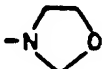
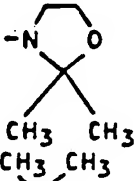
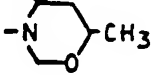
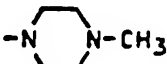
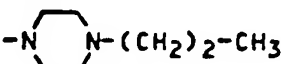
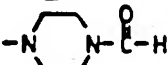
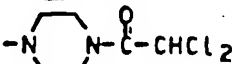
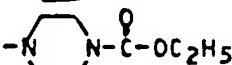
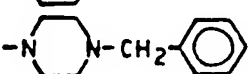
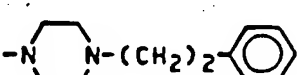
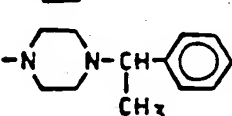
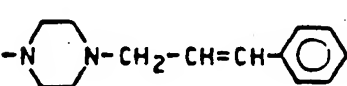
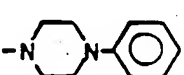
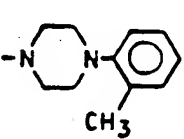
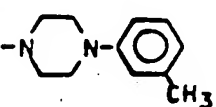
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Table 1 (Continuation)

Example R No.	R ¹	R ²	or	$\begin{array}{c} \text{R}^1 \\ \\ \text{---N---} \\ \\ \text{R}^2 \end{array}$
I-357	Cl ₂ CH-			
I-358	Cl ₂ CH-			
I-359	Cl ₂ CH-			
I-360	Cl ₂ CH-			
I-361	Cl ₂ CH-			
I-362	Cl ₂ CH-			
I-363	Cl ₂ CH-			
I-364	Cl ₂ CH-			
I-365	Cl ₂ CH-			
I-366	Cl ₂ CH-			
I-367	Cl ₂ CH-			

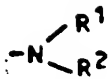
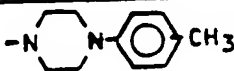
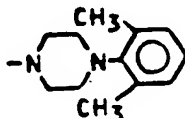
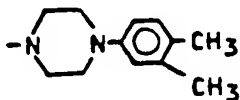
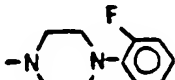
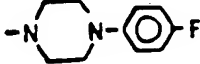
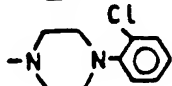
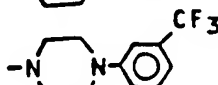
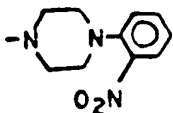
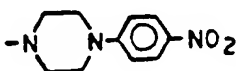
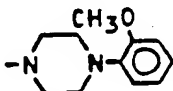
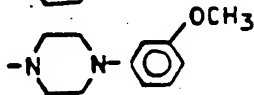
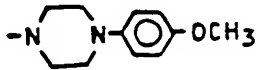
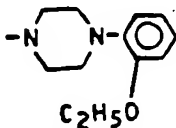
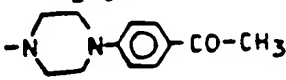
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Table 1 (Continuation)

Example R No.	R ¹	R ²	or	$\begin{array}{c} \text{R}^1 \\ \diagup \\ \text{N} \\ \diagdown \\ \text{R}^2 \end{array}$
I-368	Cl ₂ CH-			
I-369	Cl ₂ CH-			
I-370	Cl ₂ CH-			
I-371	Cl ₂ CH-			
I-372	Cl ₂ CH-			
I-373	Cl ₂ CH-			
I-374	Cl ₂ CH-			
I-375	Cl ₂ CH-			
I-376	Cl ₂ CH-			
I-377	Cl ₂ CH-			
I-378	Cl ₂ CH-			
I-379	Cl ₂ CH-			
I-380	Cl ₂ CH-			
I-381	Cl ₂ CH-			
I-382	Cl ₂ CH-			

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Table 1 (Continuation)

Example R No.	R ¹	R ²	or	
I-383	Cl ₂ CH-			
I-384	Cl ₂ CH-			
I-385	Cl ₂ CH-			
I-386	Cl ₂ CH-			
I-387	Cl ₂ CH-			
I-388	Cl ₂ CH-			
I-389	Cl ₂ CH-			
I-390	Cl ₂ CH-			
I-391	Cl ₂ CH-			
I-392	Cl ₂ CH-			
I-393	Cl ₂ CH-			
I-394	Cl ₂ CH-			
I-395	Cl ₂ CH-			
I-396	Cl ₂ CH-			

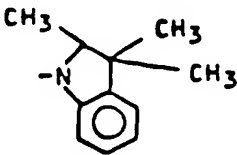
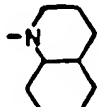
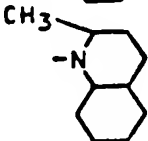
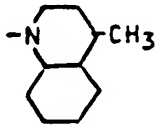
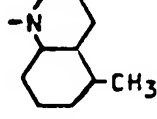
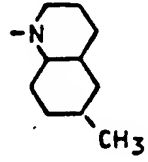
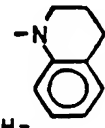
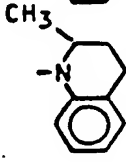
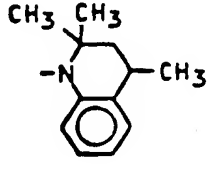

~~See A 24 460~~

Table 1 (Continuation)

Example No.	R	R ¹	R ²	or	$\begin{array}{c} \text{R}^1 \\ \diagup \\ \text{N} \\ \diagdown \\ \text{R}^2 \end{array}$
I-397	Cl ₂ CH-				
I-398	Cl ₂ CH-				
I-399	Cl ₂ CH-				
I-400	Cl ₂ CH-				
I-401	Cl ₂ CH-				
I-402	Cl ₂ CH-				
I-403	Cl ₂ CH-				
I-404	Cl ₂ CH-				
I-405	Cl ₂ CH-				
I-406	Cl ₂ CH-				
I-407	Cl ₂ CH-				
I-408	Cl ₂ CH-				
I-409	Cl ₂ CH-				

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Table 1 (Continuation)

Example No.	R	R ¹	R ²	or	$\begin{array}{c} \text{R}^1 \\ \diagup \\ \text{N} \\ \diagdown \\ \text{R}^2 \end{array}$
I-410	Cl ₂ CH-				
I-411	Cl ₂ CH-				
I-412	Cl ₂ CH-				
I-413	Cl ₂ CH-				
I-414	Cl ₂ CH-				
I-415	Cl ₂ CH-				
I-416	Cl ₂ CH-				
I-417	Cl ₂ CH-				
I-418	Cl ₂ CH-				
I-419	Cl ₂ CH-				

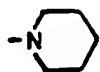
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Table 1 (Continuation)

Example No.	R	R ¹	R ²	or	$\begin{array}{c} \text{R}^1 \\ \diagup \\ \text{N} \\ \diagdown \\ \text{R}^2 \end{array}$
I-420	Cl ₂ CH-				
I-421	Cl ₂ CH-				
I-422	Cl ₃ C-	H	-CH ₂ -CH=CH ₂		
I-423	Cl ₃ C-	H	-CH ₂ CH ₂ -Br		
I-424	Cl ₃ C-	H	$\begin{array}{c} \text{CH}_3 \\ \\ \text{C}-\text{C}_2\text{H}_5 \\ \\ \text{CN} \end{array}$		
I-425	Cl ₃ C-	H	-CH ₂ -NHCOCH ₂ Cl		
I-426	Cl ₃ C-	CH ₃	CH ₃		
I-427	Cl ₃ C-	CH ₃	$\begin{array}{c} \text{CH}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$		
I-428	Cl ₃ C-	C ₂ H ₅	-CH ₂ CH ₂ CH ₂ CH ₃		
I-429	Cl ₃ C-	-CH ₂ CH ₂ CH ₃	-CH ₂ CH ₂ CH ₃		
I-430	Cl ₃ C-	-CH(CH ₃) ₂	-CH(CH ₃) ₂		
I-431	Cl ₃ C-	-CH ₂ CH(CH ₃) ₂	-CH ₂ CH(CH ₃) ₂		
I-432	Cl ₃ C-	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂		
I-433	Cl ₃ C-				
I-434	Cl ₃ C-				
I-435	Br ₃ C-	H	$\begin{array}{c} \text{CH}_3 \\ \\ \text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$		

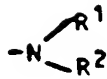
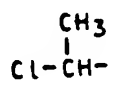
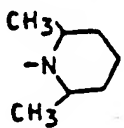
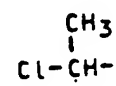
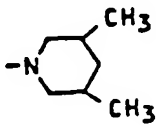
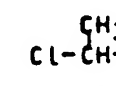
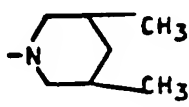
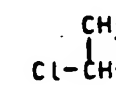
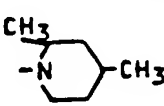
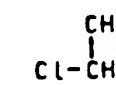
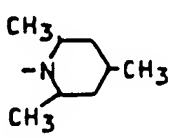
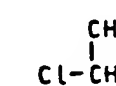
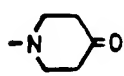
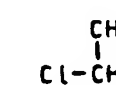
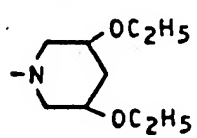
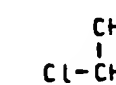
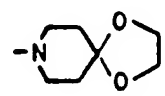
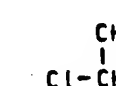
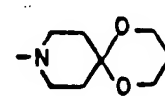
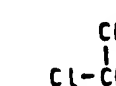

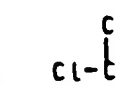
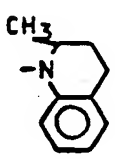
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Table 1 (Continuation)

Example No.	R	R ¹	R ²	or	$\begin{array}{c} \text{R}^1 \\ \diagup \\ \text{N} \\ \diagdown \\ \text{R}^2 \end{array}$
I-436	Br ₃ C-	H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{CN} \\ \\ \text{CH}_3 \end{array}$		
I-437	Br ₃ C-	H	-CH ₂ -CH=CH ₂		
I-438	Br ₃ C-	CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$		
I-439	Br ₃ C-	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂		
I-440	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂		
I-441	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$	-CH ₂ -CH=CH ₂	-CH ₂ -CO-CH ₃		
I-442	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$	-CH ₂ -CH=CH ₂	-CH ₂ -CH=N-OCH ₃		
I-443	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$	-CH ₂ -CH=CH ₂	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}_2-\text{C}=\text{N}-\text{OCH}_3 \end{array}$		
I-444	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$	-CH ₂ -CH=CH ₂	$\begin{array}{c} \text{CH}_3 \\ \diagup \quad \diagdown \\ \text{N} \quad \text{O} \quad \text{N} \\ \quad \quad \\ -\text{CH}_2-\text{C} \quad \text{C} \quad \text{C}- \end{array}$		
I-445	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$	-CH ₂ -CH=CH ₂	$\begin{array}{c} \text{N} \\ \diagup \quad \diagdown \\ \text{C} \quad \text{C} \\ \quad \\ -\text{CH}_2-\text{C} \quad \text{C}- \end{array}$		
I-446	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$	-CH ₂ -CH=CH ₂	$\begin{array}{c} \text{CH}_3 \\ \diagup \quad \diagdown \\ \text{N} \quad \text{N} \\ \quad \\ -\text{CH}_2-\text{C} \quad \text{C}- \end{array}$		
I-447	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$	-CH ₂ -CH=CH ₂	$\begin{array}{c} \text{N} \quad \text{N} \\ \quad \\ -\text{CH}_2-\text{C} \quad \text{C}- \end{array}$		
I-448	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{COOCH}_3 \end{array}$	$\begin{array}{c} \text{CH}_3 \\ \\ \text{C}_6\text{H}_4 \\ \\ \text{CH}_3 \end{array}$		
I-449	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$				

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Table 1 (Continuation)

Example No	R	R ¹	R ²	or	
I-450					
I-451					
I-452					
I-453					
I-454					
I-455					
I-456					
I-457					
I-458					
I-459					
I-460					

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Table 1 (Continuation)

Example No.	R	R ¹	R ²	or	$\begin{array}{c} \text{R}^1 \\ \diagup \\ \text{N} \\ \diagdown \\ \text{R}^2 \end{array}$
I-461	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$				$\text{-N} \begin{array}{c} \diagup \\ \diagdown \end{array} \text{N-CH}_3$
I-462	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$				$\text{-N} \begin{array}{c} \diagup \\ \diagdown \end{array} \text{N-COOC}_2\text{H}_5$
I-463	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$				$\text{-N} \begin{array}{c} \diagup \\ \diagdown \end{array} \text{N-(CH}_2)_2 \text{C}_6\text{H}_5$
I-464	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$				$\text{-N} \begin{array}{c} \diagup \\ \diagdown \end{array} \text{N-CH(CH}_3\text{)-C}_6\text{H}_5$
I-465	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$				$\text{-N} \begin{array}{c} \diagup \\ \diagdown \end{array} \text{N-C}_6\text{H}_5$
I-466	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$				$\text{-N} \begin{array}{c} \diagup \\ \diagdown \end{array} \text{N-C}_6\text{H}_4\text{(CH}_3\text{)}$
I-467	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}_2- \end{array}$				$\text{-N} \begin{array}{c} \diagup \\ \diagdown \end{array} \text{N-C}_6\text{H}_4\text{(CH}_3\text{)}$
I-468	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}_2- \end{array}$				$\text{-N} \begin{array}{c} \diagup \\ \diagdown \end{array} \text{N-C}_6\text{H}_3\text{(CH}_3)_2$
I-469	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$				$\text{-N} \begin{array}{c} \diagup \\ \diagdown \end{array} \text{N-C}_6\text{H}_4\text{(C}_2\text{H}_5\text{O)}$
I-470	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$				$\text{-N} \begin{array}{c} \diagup \\ \diagdown \end{array} \text{N-C}_6\text{H}_4\text{(CF}_3\text{)}$
I-471	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$				$\text{-N} \begin{array}{c} \diagup \\ \diagdown \end{array} \text{N-C}_6\text{H}_4\text{(N)}$
I-472	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$				$\text{-N} \begin{array}{c} \diagup \\ \diagdown \end{array} \text{N-CO-CH(CH}_3\text{)-Cl}$
I-473	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$				$\text{-N} \begin{array}{c} \diagup \\ \diagdown \end{array} \text{N-CO-CH(CH}_3\text{)-CH(CH}_3\text{)-Cl}$

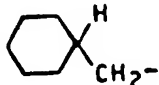
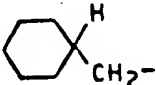
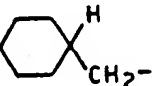
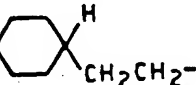
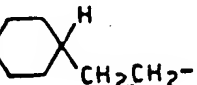
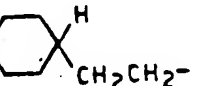
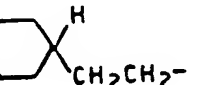
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Table 1 (Continuation)

Example No.	R	R ¹	R ² or $\begin{array}{c} \text{R}^1 \\ \diagup \\ \text{N} \\ \diagdown \\ \text{R}^2 \end{array}$
I-474	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$		
I-475	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Cl}-\text{CH}- \end{array}$		
I-476	$\text{Cl}-\text{CH}_2\text{CH}_2-$	H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-477	$\text{Cl}-\text{CH}_2\text{CH}_2-$	CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-478	$\text{Cl}-\text{CH}_2\text{CH}_2-$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-479	$\begin{array}{c} \text{Cl} \\ \\ \text{CH}_3-\text{C}- \\ \\ \text{Cl} \end{array}$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-480	$\begin{array}{c} \text{Br} \\ \\ \text{CH}_3-\text{CH}- \end{array}$	H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-481	$\begin{array}{c} \text{Br} \\ \\ \text{CH}_3-\text{CH}- \end{array}$	CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-482	$\begin{array}{c} \text{Br} \\ \\ \text{CH}_3-\text{CH}- \end{array}$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-483	$\begin{array}{c} \text{F} \quad \text{F} \\ \quad \\ \text{F}_3\text{C}-\text{C}-\text{C}- \\ \quad \\ \text{F} \quad \text{F} \end{array}$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-484	$\text{BrCH}_2\text{CH}_2\text{CH}_2-$	H	$-\text{SO}_2\text{Cl}$
I-485	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Br}-\text{C}- \\ \\ \text{CH}_3 \end{array}$	H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$






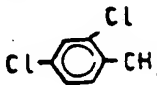





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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-486	$\begin{array}{c} \text{CH}_3 \\ \\ \text{Br}-\text{C}- \\ \\ \text{CH}_3 \end{array}$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-487	$\text{Br}-(\text{CH}_2)_5-$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-488	$\text{HO}-\text{CH}_2-$	C_2H_5	C_2H_5
I-489	$\text{NC}-\text{CH}_2-$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-490	$\text{NCO}-\text{CH}_2-$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-491		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-492		CH_3	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-493		$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-494		CH_3	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-495		$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-496		CH_3	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-497		$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-498	$\text{CH}_3\text{OCH}_2\text{CH}_2-$	$-\text{C}_2\text{H}_5$	$-\text{C}_2\text{H}_5$

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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-499	$\text{HO}-\underset{\text{CHCl}_2}{\overset{\text{CHCl}_2}{\text{C}}}-\text{O}-\text{CH}_2-$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-500	$\text{HO}-\underset{\text{CHCl}_2}{\overset{\text{CCl}_3}{\text{C}}}-\text{O}-\text{CH}_2-$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-501	$\text{C}_2\text{H}_5\text{S}-\underset{\text{C}_2\text{H}_5\text{S}}{\text{CH}}-$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-502	 -CH ₂ -	H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-503	 -CH ₂ -	CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-504	 -CH ₂ -	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-505	 - $\underset{\text{C}_2\text{H}_5}{\text{CH}}-$	H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-506	 - $\underset{\text{benzene ring}}{\text{CH}}-$	CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-507	 -CH ₂ -	H	 -CH=CH-CO-C(CH ₃) ₃
I-508	 - $\underset{\text{OCH}_3}{\text{CH}}-$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-509	 - $\underset{\text{Cl}}{\text{CH}}-$	H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-510	 - $\underset{\text{Cl}}{\text{CH}}-$	CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-511	 - $\underset{\text{Cl}}{\text{CH}}-$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$

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Table 1 (Continuation)

Example No.	R ¹	R ²
I-512	$\begin{array}{c} \text{Cl}-\text{C}_6\text{H}_4-\text{O} \\ \\ \text{CH}- \\ \\ \text{Cl}-\text{C}_6\text{H}_4-\text{O} \end{array}$	$\begin{array}{c} -\text{CH}_2\text{CH}=\text{CH}_2 \\ -\text{CH}_2-\text{CH}=\text{CH}_2 \end{array}$
I-513	$\text{Cl}-\text{C}_6\text{H}_4-\text{S}-\text{CH}_2-$	$\begin{array}{c} -\text{CH}_2-\text{CH}(\text{CH}_3)_2 \\ \\ \text{CH}_3 \\ -\text{C}-\text{CN} \\ \\ \text{CH}_3 \end{array}$
I-514	$\begin{array}{c} \text{CH}_2 \\ \\ \text{S} \end{array}$	$\begin{array}{c} -\text{CH}_2-\text{CH}=\text{CH}_2 \\ -\text{CH}_2-\text{CH}=\text{CH}_2 \end{array}$
I-515	$\text{CH}_3-\text{CO}-\text{CH}_2-$	$\begin{array}{c} -\text{CH}_2-\text{CH}=\text{CH}_2 \\ -\text{CH}_2-\text{CH}=\text{CH}_2 \end{array}$
I-516	$\text{CH}_3\text{COOCH}-$	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-517	$\text{CH}_3\text{CO}-\text{CH}-$	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{CN} \\ \\ \text{CH}_3 \end{array}$
I-518	$\text{Cl}_2\text{CH}-\text{C}(=\text{O})-\text{O}-\text{CH}_2-$	$\begin{array}{c} -\text{CH}_2-\text{CH}=\text{CH}_2 \\ -\text{CH}_2-\text{CH}=\text{CH}_2 \end{array}$
I-519	$\begin{array}{c} \text{ClClClClCl} \\ \\ \text{C}=\text{C}-\text{C}=\text{C}-\text{C}=\text{O} \\ \quad \quad \\ \text{Cl} \quad \quad \text{O}-\text{CH}_2- \end{array}$	$\begin{array}{c} -\text{CH}_2-\text{CH}=\text{CH}_2 \\ -\text{CH}_2-\text{CH}=\text{CH}_2 \end{array}$
I-520	$\text{CH}_3\text{O}-\text{CO}-\text{CH}_2\text{CH}_2-$	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-521	$(\text{CH}_2=\text{CH}-\text{CH}_2)_2\text{N}-\text{CH}_2-$	$\begin{array}{c} -\text{CH}_2-\text{CH}=\text{CH}_2 \\ -\text{CH}_2-\text{CH}=\text{CH}_2 \end{array}$
I-522	$\begin{array}{c} \text{CH}_3 \\ \\ \text{HC}\equiv\text{C}-\text{C}-\text{NH} \\ \quad \quad \\ \text{CH}_3 \quad \text{CO} \\ \quad \quad \text{CH}_2- \end{array}$	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$

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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-523	$\text{HC}\equiv\text{C}-\underset{\text{CH}_2-}{\overset{\text{CH}_3}{\text{CH}}}-\underset{\text{C}=\text{O}}{\overset{\text{CH}_3}{\text{N}}}$	-CH ₃	$\underset{\text{CH}-\text{C}\equiv\text{CH}}{\overset{\text{CH}_3}{ }}$
I-524	$(\text{CH}_2=\text{CH}-\text{CH}_2)_2\underset{\text{CH}_2-}{\overset{\text{C}=\text{O}}{\text{N}}}$	-CH ₂ CH=CH ₂	-CH ₂ -CH=CH ₂
I-525	$\text{HC}\equiv\text{C}-\underset{\text{CH}_3}{\overset{\text{CH}_3}{\text{CH}}}-\underset{\text{C}=\text{O}}{\overset{\text{O}}{\text{N}}}-(\text{CH}_2)_2-$	-CH ₃	$\underset{\text{CH}-\text{C}\equiv\text{CH}}{\overset{\text{CH}_3}{ }}$
I-526	$(\text{CH}_2=\text{CHCH}_2)_2\underset{\text{CH}_3}{\overset{\text{O}}{\text{N}}}-\text{C}-(\text{CH}_2)_2-$	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-527	$\text{HC}\equiv\text{C}-\underset{\text{CH}_3}{\overset{\text{CH}_3}{\text{CH}}}-\underset{\text{C}=\text{O}}{\overset{\text{O}}{\text{N}}}-(\text{CH}_2)_3-$	-CH ₃	$\underset{\text{CH}-\text{C}\equiv\text{CH}}{\overset{\text{CH}_3}{ }}$
I-528	$(\text{H}_2\text{C}=\text{CHCH}_2)_2\underset{\text{CH}_3}{\overset{\text{O}}{\text{N}}}-\text{C}-(\text{CH}_2)_3-$	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-529	$\text{HC}\equiv\text{C}-\underset{\text{CH}_3}{\overset{\text{CH}_3}{\text{C}}}-\text{NH}-\underset{\text{CH}_3}{\overset{\text{CH}_3}{\text{C}}}-\underset{\text{C}=\text{O}}{\overset{\text{O}}{\text{N}}}$	H	$\underset{\text{CH}-\text{C}\equiv\text{CH}}{\overset{\text{CH}_3}{ }}$
I-530	$(\text{H}_2\text{C}=\text{CHCH}_2)_2\underset{\text{CH}_3}{\overset{\text{O}}{\text{N}}}-\underset{\text{CH}_3}{\overset{\text{CH}_3}{\text{C}}}-\text{C}$	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-531	$\text{HC}\equiv\text{C}-\underset{\text{CH}_3}{\overset{\text{CH}_3}{\text{CH}}}-\underset{\text{C}=\text{O}}{\overset{\text{CH}_3}{\text{N}}}-\underset{\text{CH}_3}{\overset{\text{CH}_3}{\text{C}}}-\text{C}$	-CH ₃	$\underset{\text{CH}-\text{C}\equiv\text{CH}}{\overset{\text{CH}_3}{ }}$
I-532	$\text{HC}\equiv\text{C}-\underset{\text{CH}_3}{\overset{\text{CH}_3}{\text{CH}}}-\underset{\text{C}=\text{O}}{\overset{\text{O}}{\text{N}}}-(\text{CH}_2)_4-$	-CH ₃	$\underset{\text{CH}-\text{C}\equiv\text{CH}}{\overset{\text{CH}_3}{ }}$
I-533	$(\text{CH}_2=\text{CHCH}_2)_2\underset{\text{CH}_3}{\overset{\text{O}}{\text{N}}}-\text{C}-(\text{CH}_2)_4-$	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂

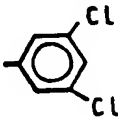










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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-534	$\text{HC}\equiv\text{C}-\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{NH}-\overset{\text{O}}{\text{C}}-\text{CH}_2-\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{CH}_2-$	H	$\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{C}\equiv\text{CH}$
I-535	$\text{HC}\equiv\text{C}-\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{CH}}}-\text{N}-\overset{\text{O}}{\text{C}}-\text{CH}_2-\text{O}-\text{CH}_2-$	-CH ₃	$\overset{\text{CH}_3}{\text{CH}}-\text{C}\equiv\text{CH}$
I-536	$(\text{CH}_2=\text{CHCH}_2)_2\text{N}-\overset{\text{O}}{\text{C}}-\text{CH}_2-\text{O}-\text{CH}_2-$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-537	$(\text{CH}_2=\text{CHCH}_2)_2\text{N}-\overset{\text{O}}{\text{S}}-\text{CH}_2-$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-538	$\text{CH}_2=\text{CH}-$	H	$\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{C}\equiv\text{CH}$
I-539	$\text{CH}_2=\text{CH}-$	CH ₃	$\overset{\text{CH}_3}{\text{CH}}-\text{C}\equiv\text{CH}$
I-540	$\text{CH}_3-\text{CH}=\text{CH}-$	H	$\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{C}\equiv\text{CH}$
I-541	$\text{CH}_3-\text{CH}=\text{CH}-$	$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-542	$\overset{\text{CH}_3}{\text{CH}_2=\text{C}}-$	H	$\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{C}\equiv\text{CH}$
I-543	$(\text{CH}_3)_2\text{C}=\text{CH}-$	H	$\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{C}\equiv\text{CH}$
I-544	$(\text{CH}_3)_2\text{C}=\text{CH}-$	-CH ₃	$\overset{\text{CH}_3}{\text{CH}}-\text{C}\equiv\text{CH}$
I-545	$\text{CH}_3-\text{CH}=\text{CH}-\text{CH}=\text{CH}-$	H	$\overset{\text{CH}_3}{\underset{\text{CH}_3}{\text{C}}}-\text{C}\equiv\text{CH}$

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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-546	$\text{CH}_3\text{-CH=CH-CH=CH-}$	$\text{-CH}_2\text{-CH=CH}_2$	$\text{-CH}_2\text{-CH=CH}_2$
I-547	Cl-CH=C- Cl	-CH_3	$\text{-CH-C}\equiv\text{CH}$ CH_3
I-548	HO-C=C- CH_3 COOCH_3	H	
I-549	 -CH=CH-	H	$\text{-C(CH}_3)_3$
I-550	 -CH=CH-	H	$\text{-C(CH}_3)_2\text{-CN}$
I-551	 -CH=CH-	CH_3	$\text{-CH-C}\equiv\text{CH}$ CH_3
I-552	 -CH=CH-	$\text{-CH}_2\text{-CH=CH}_2$	$\text{-CH}_2\text{-CH=CH}_2$
I-553	 -CH=CH-	H	$\text{-C(CH}_3)_2\text{-CN}$
I-554	 -CH=CH-	$\text{-CH}_2\text{-CH=CH}_2$	$\text{-CH}_2\text{-CH=CH}_2$
I-555	 -CH=CH-	$\text{-CH}_2\text{-CH=CH}_2$	$\text{-CH}_2\text{-CH=CH}_2$
I-556	 -CH=CH-	$\text{-CH}_2\text{-CH=CH}_2$	$\text{-CH}_2\text{-CH=CH}_2$
I-557	$\text{CH}_3\text{-}$  -CH=CH-	H	$\text{-C(CH}_3)_2\text{-C}\equiv\text{CH}$
I-558	$\text{CH}_3\text{-}$  -CH=CH-	$\text{-CH}_2\text{-CH=CH}_2$	$\text{-CH}_2\text{-CH=CH}_2$


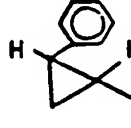
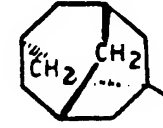
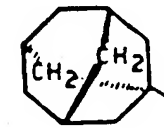
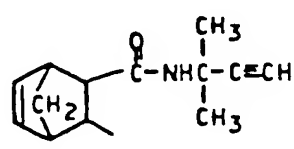
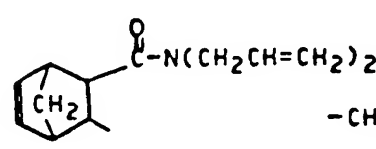





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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-559		H	
I-560		H	
I-561		H	
I-562		-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-563		H	
I-564		CH ₃	
I-565		-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-566		H	
I-567		H	
I-568		CH ₃	
I-569		-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂

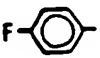
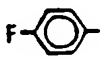
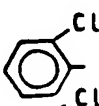

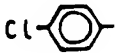
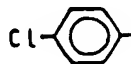
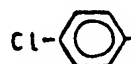

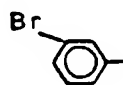
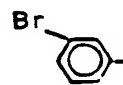
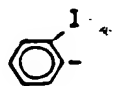

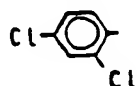
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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-570		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-571		$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-572		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-573		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{CN} \\ \\ \text{CH}_3 \end{array}$
I-574		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-575		$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-576		CH_3	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-577		$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-578		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-579		CH_3	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-580		$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$

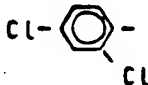
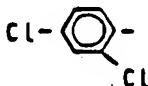
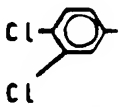
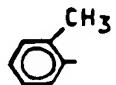
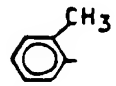
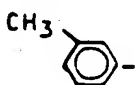
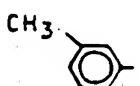
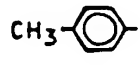
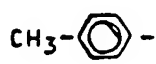
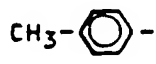
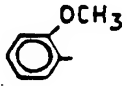
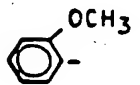
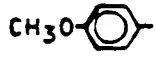
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Table 1 (Continuation)

example No.	R	R ¹	R ²
I-581		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{CN} \\ \\ \text{CH}_3 \end{array}$
I-582		$-\text{CH}_2=\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-583		CH_3	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-584		$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-585		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-586		CH_3	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-587		$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-588		H	$-\text{C}(\text{CH}_3)_3$
I-589		$-\text{CH}_3$	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-590		$-\text{CH}_2-\text{CH}=\text{CH}_2$	$-\text{CH}_2-\text{CH}=\text{CH}_2$
I-591		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-592		$-\text{CH}_3$	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-593		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$

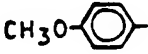
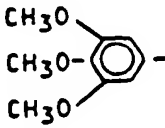
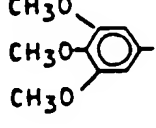
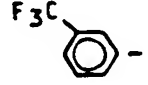
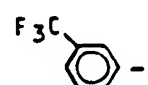
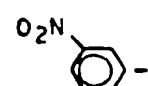
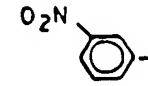
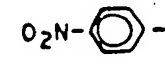
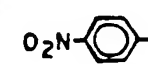
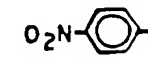
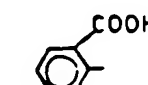
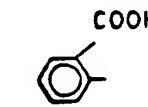
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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-594		-CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-595		H	$\begin{array}{c} \text{CH}=\text{CH}-\text{CO}-\text{C}(\text{CH}_3)_3 \\ \\ \text{C}_6\text{H}_4 \end{array}$
I-596		-CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-597		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-598		-CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-599		-CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-600		-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-601		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-602		CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-603		-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-604		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-605		-CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-606		-CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$

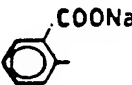
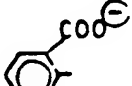
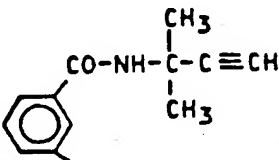
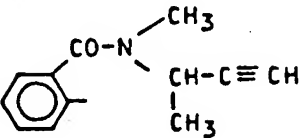
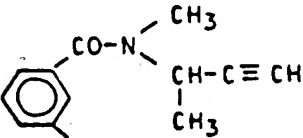
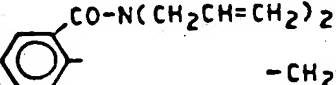
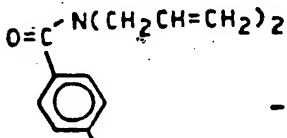
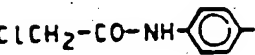
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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-607		-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-608		-CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-609		-CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-610		-CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-611		-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-612		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-613		-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-614		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-615		-CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-616		-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-617		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-618		-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂

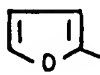
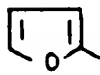


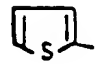

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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-619		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
I-620		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$
	$\begin{array}{c} \text{CH}_3 \\ \\ \text{H}_3\text{N}^+-\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$		
I-621		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \\ \\ \text{CH}_3 \end{array}$
I-622		-CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-623		-CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$
I-624		-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-625		-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-626		H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$

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Table 1 (Continuation)

Example No.	R	R ¹	R ²
I-627	$ \begin{array}{c} \text{O} \\ \parallel \\ (\text{CH}_2=\text{CHCH}_2)_2\text{N}-\text{C}-\text{C}_6\text{H}_4-\text{C}-\text{N}(\text{CH}_2=\text{CHCH}_2)_2 \\ \parallel \\ \text{O} \end{array} $	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-628	$ \begin{array}{c} \text{CH}_3 \quad \text{O} \\ \quad \parallel \\ \text{NC}-\text{C}-\text{NH}-\text{C}-\text{C}_6\text{H}_4-\text{C}-\text{NH}-\text{C}-\text{CH}_3 \\ \quad \parallel \\ \text{CH}_3 \quad \text{O} \end{array} $	H	$ \begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{CN} \\ \\ \text{CH}_3 \end{array} $
I-629	$ \begin{array}{c} \text{CH}_3 \\ \\ \text{S} \\ \\ \text{S} \end{array} $	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-630		H	$ \begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array} $
I-631		-CH ₃	$ \begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array} $
I-632		-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂
I-633		H	$ \begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array} $
I-634		-CH ₃	$ \begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array} $
I-635		-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂

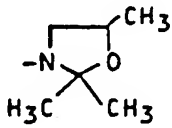
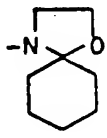
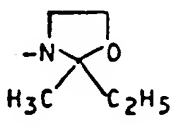
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Table 1 (Continuation)

Example No.	R	R ¹	R ²	or	-N ^{R¹} _{R²}
I-636	$\begin{array}{c} \text{C}\equiv\text{CH} \\ \\ \text{CH}_3-\text{C}-\text{CH}_3 \\ \\ \text{HN}-\text{C}-\text{C}_5\text{H}_4\text{N} \\ \\ \text{O} \end{array}$	H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$		
I-637	$\begin{array}{c} \text{C}_5\text{H}_4\text{N} \\ \\ \text{NC}(=\text{O}) \\ \\ (\text{CH}_2=\text{CHCH}_2)_2 \end{array}$	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂		
I-638	Cl-CH ₂ CH ₂ O-	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂		
I-639	$\begin{array}{c} \text{Cl} \\ \\ \text{CHCH}_2\text{O}- \\ \\ \text{Cl} \end{array}$	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂		
I-640	CH ₃ -C≡C-CH ₂ O-	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂		
I-641	Cl-C ₆ H ₄ -O-	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂		
I-642	C ₂ H ₅ O-C(=O)-	-CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$		
I-643	C ₂ H ₅ O-C(=O)-	-CH ₂ -CH=CH ₂	-CH ₂ -CH=CH ₂		
I-644	$\begin{array}{c} \text{CH}_3 \\ \\ \text{HC}\equiv\text{C}-\text{C}-\text{NH}-\text{C}(=\text{O})- \\ \\ \text{CH}_3 \end{array}$	H	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{C}-\text{C}\equiv\text{CH} \\ \\ \text{CH}_3 \end{array}$		
I-645	$\begin{array}{c} \text{CH}_3 \quad \text{CH}_3 \\ \quad \\ \text{HC}\equiv\text{C}-\text{CH}-\text{N}-\text{C}(=\text{O})- \\ \\ \text{O} \end{array}$	-CH ₃	$\begin{array}{c} \text{CH}_3 \\ \\ -\text{CH}-\text{C}\equiv\text{CH} \end{array}$		
I-646	(CH ₂ =CH-CH ₂) ₂ N-C(=O)-	-CH ₂ CH=CH ₂	-CH ₂ -CH=CH ₂		

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Table 1 (Continuation)

Example No.	R	R ¹	R ²	or	$\begin{array}{c} \text{R}^1 \\ \diagup \\ \text{N} \\ \diagdown \\ \text{R}^2 \end{array}$
I-647	Cl ₂ CH-				
I-648	Cl ₂ CH-				
I-649	Cl ₂ CH-	-CH ₂ -CH=CH ₂	-CH ₂ -CO-NH-CH ₂ -CH=CH ₂		
I-650	Cl ₂ CH-				

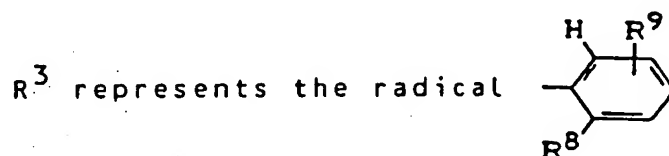
EC-A 24-400

The amides of the formula (I) which can be used according to the invention are known (compare, for example, DE-OS (German Published Specification) 2,828,265, DE-OS (German Published Specification) 3,228,007, DE-OS (German Published Specification) 2,218,097, DE-OS (German Published Specification) 2,350,547, DE-OS (German Published Specification) 3,426,541, DE-OS (German Published Specification) 2,905,560 and U.S. Patent Specification 4,531,970).

As already mentioned, the amides of the formula (I) which can be used according to the invention are suitable for improving the crop plant tolerance of herbicidally active sulphonyliso(thio)urea derivatives of the formula (II).

Formula (II) provides a general definition of the herbicidally active sulphonylurea derivatives which can be used according to the invention.

Herbicidal sulphonyliso(thio)urea derivatives of the formula (II) which can preferably be used are those in which



wherein

R^8 and R^9 are identical or different and represent hydrogen, halogen [such as, in particular, fluorine, chlorine, bromine and/or iodine], cyano, nitro or C_1 - C_6 -alkyl [which is optionally substituted by fluorine, chlorine, bromine, cyano, carboxyl, C_1 - C_4 -alkoxycarbonyl, C_1 - C_4 -alkyl-amino-carbonyl, di-(C_1 - C_4 -alkyl)-amino-carbonyl, hydroxyl, C_1 - C_4 -alkoxy, formyloxy, C_1 - C_4 -alkyl-carbonyloxy, C_1 - C_4 -alkoxy-carbonyloxy, C_1 - C_4 -alkylamino-carbonyloxy, C_1 - C_4 -alkylthio, C_1 - C_4 -

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alkylsulphinyl, C₁-C₄-alkylsulphonyl, di-
(C₁-C₄-alkyl)-aminosulphonyl, C₃-C₆-cycloalkyl
or phenyl], or represent C₂-C₆-alkenyl [which is
optionally substituted by fluorine, chlorine,
bromine, cyano, C₁-C₄-alkoxycarbonyl, carboxyl
or phenyl], or represent C₂-C₆-alkinyl [which is
optionally substituted by fluorine, chlorine,
bromine, cyano, C₁-C₄-alkoxy-carbonyl, carboxyl
or phenyl], or represent C₁-C₄-alkoxy [which is
optionally substituted by fluorine, chlorine,
bromine, cyano, carboxyl, C₁-C₄-alkoxyimino-
C₁-C₄-alkyl, C₁-C₄-alkoxy-carbonyl, C₁-C₄-
alkoxy, C₁-C₄-alkylthio, C₁-C₄-alkylsulphinyl
or C₁-C₄-alkylsulphonyl], or represent C₁-C₄-
alkylthio [which is optionally substituted by
fluorine, chlorine, bromine, cyano, carboxyl,
C₁-C₄-alkoxycarbonyl, C₁-C₄-alkylthio,
C₁-C₄-alkylsulphinyl or C₁-C₄-alkylsulphonyl],
or represent C₃-C₆-alkenyloxy [which is option-
ally substituted by fluorine, chlorine, bromine,
cyano or C₁-C₄-alkoxy-carbonyl], or represent
C₂-C₆-alkenylthio [which is optionally substi-
tuted by fluorine, chlorine, bromine, cyano, nitro,
C₁-C₃-alkylthio or C₁-C₄-alkoxycarbonyl],
C₃-C₆-alkinyloxy or C₃-C₆-alkinylthio, or
represent the radical -S(O)_p-R¹⁰,

wherein

p represents the number 1 or 2 and
R¹⁰ represents C₁-C₄-alkyl [which is optionally
substituted by fluorine, chlorine, bromine, cyano
or C₁-C₄-alkoxy-carbonyl], C₃-C₆-alkenyl,
C₃-C₆-alkinyl, C₁-C₄-alkoxy, C₁-C₄-alkoxy-
amino, C₁-C₄-alkoxy-C₁-C₄-alkylamino, C₁-
C₄-alkylamino or di(C₁-C₄-alkyl)-amino,
or furthermore
R⁸ and R⁹ represent phenyl or phenoxy, or represent

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C₁-C₄-alkylcarbonylamino, C₁-C₄-alkoxycarbonyl-
amino, C₁-C₄-alkylamino-carbonylamino, di-
(C₁-C₄-alkyl)-amino-carbonylamino, or represent
the radical -CO-R¹¹,

5 wherein

R¹¹ represents C₁-C₆-alkyl, C₁-C₆-alkoxy,
C₁-C₄-alkoxyimino-C₁-C₄-alkoxy, C₃-C₆-
cycloalkoxy, C₃-C₆-alkenyloxy, C₁-C₄-alkyl-
thio, C₁-C₄-alkylamino, C₁-C₄-alkoxyamino,
10 C₁-C₄-alkoxy-C₁-C₄-alkyl-amino or di-(C₁-C₄-
alkyl)amino [which are optionally substituted by
fluorine and/or chlorine], or furthermore
R⁸ and R⁹ represent C₁-C₄-alkylsulphonyl-
C₁-C₄-alkylsulphonyloxy, di-(C₁-C₄-alkyl)-
15 aminosulphonylamino or represent the radical
-CH=N-R¹²,

wherein

R¹² represents C₁-C₆-alkyl which is optionally
substituted by fluorine, chlorine, cyano, carboxyl,
20 C₁-C₄-alkoxycarbonyl, C₁-C₄-alkylthio, C₁-C₄-
alkylsulphinyl or C₁-C₄-alkylsulphonyl, or
represents benzyl which is optionally substituted
by fluorine or chlorine, or represents C₃-C₆-
alkenyl or C₃-C₆-alkinyl which is optionally
25 substituted by fluorine or chlorine, or represents
phenyl which is optionally substituted by fluorine,
chlorine, bromine, C₁-C₄-alkyl, C₁-C₄-alkoxy,
trifluoromethyl, trifluoromethoxy or trifluoro-
methylthio, or represents C₁-C₆-alkoxy, C₃-C₆-
30 alkenoxy, C₃-C₆-alkinoxy or benzyloxy which is
optionally substituted by fluorine and/or chlorine,
or represents amino, C₁-C₄-alkylamino, di-
(C₁-C₄-alkyl)amino, phenylamino, C₁-C₄-alkyl-
carbonyl-amino, C₁-C₄-alkoxy-carbonylamino, or
35 C₁-C₄-alkyl-sulphonylamino, or represents
phenylsulphonylamino which is optionally substitu-

ted by fluorine, chlorine, bromine or methyl;
and wherein, furthermore,



wherein

5 R^{13} represents hydrogen or C₁-C₄-alkyl and
 R^{14} and R^{15} are identical or different and represent hydrogen, fluorine, chlorine, bromine, nitro
 cyano, C₁-C₄-alkyl [which is optionally substituted by fluorine and/or chlorine], C₁-C₄-
 10 alkoxy [which is optionally substituted by fluorine and/or chlorine], carboxyl, C₁-C₄-alkoxy-
 carbonyl, C₁-C₄-alkylsulphonyl or di-(C₁-C₄-
 alkyl)-aminosulphonyl;

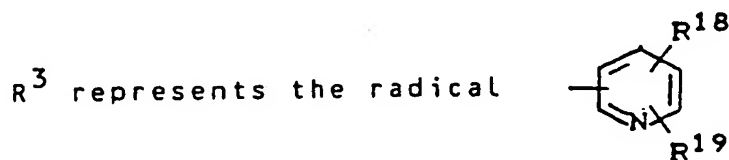
or wherein, furthermore,



wherein

R^{16} and R^{17} are identical or different and represent hydrogen, fluorine, chlorine, bromine, nitro,
 cyano, C₁-C₄-alkyl [which is optionally substituted by fluorine and/or chlorine] or C₁-C₄-
 20 alkoxy [which is optionally substituted by fluorine and/or chlorine];

or wherein, furthermore,



25 wherein

R^{18} and R^{19} are identical or different and represent hydrogen, fluorine, chlorine, bromine, nitro,
 cyano, C₁-C₄-alkyl [which is optionally substituted by fluorine and/or chlorine];

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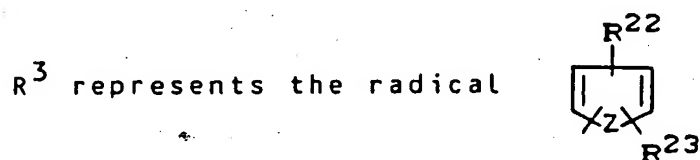
stituted by fluorine and/or chlorine] or C₁-C₄-alkoxy [which is optionally substituted by fluorine and/or chlorine], or represent C₁-C₄-alkylthio, C₁-C₄-alkylsulphinyl or C₁-C₄-alkylsulphonyl [which are optionally substituted by fluorine and/or chlorine], or represent di-(C₁-C₄-alkyl)-amino-sulphonyl or C₁-C₄-alkoxy-carbonyl; or wherein, furthermore,



wherein

R²⁰ and R²¹ are identical or different and represent hydrogen, fluorine, chlorine, bromine, C₁-C₄-alkyl [which is optionally substituted by fluorine and/or bromine] or C₁-C₄-alkoxy [which is optionally substituted by fluorine and/or chlorine], or represent C₁-C₄-alkylthio, C₁-C₄-alkylsulphinyl or C₁-C₄-alkylsulphonyl [which are optionally substituted by fluorine and/or chlorine], or represent di-(C₁-C₄-alkyl)-amino-sulphonyl;

or wherein, furthermore,



wherein

R²² and R²³ are identical or different and represent hydrogen, fluorine, chlorine, bromine, cyano, nitro, C₁-C₄-alkyl [which is optionally substituted by fluorine and/or chlorine], C₁-C₄-alkoxy [which is optionally substituted by fluorine and/or chlorine], C₁-C₄-alkylthio, C₁-C₄-alkylsulphinyl or C₁-C₄-alkylsulphonyl [which is option-

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ally substituted by fluorine and/or chlorine], di-(C₁-C₄-alkyl)-amino-sulphonyl or C₁-C₄-alkoxy-carbonyl and

Z represents oxygen, sulphur or the grouping N-Z¹,

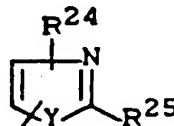
5 wherein

Z¹ represents hydrogen, C₁-C₄-alkyl [which is optionally substituted by fluorine, chlorine, bromine or cyano], C₃-C₆-cycloalkyl, benzyl, phenyl [which is optionally substituted by fluorine, chlorine, bromine or nitro], C₁-C₄-alkyl-carbonyl, C₁-C₄-alkoxy-carbonyl or di-(C₁-C₄-alkyl)-amino-carbonyl;

10

or wherein, furthermore,

R³ represents the radical



15 wherein

R²⁴ represents hydrogen, C₁-C₅-alkyl or halogen,

R²⁵ represents hydrogen or C₁-C₅-alkyl and

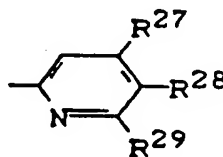
Y represents sulphur or the grouping N-R²⁶,

wherein

20 R²⁶ represents hydrogen or C₁-C₅-alkyl;

and wherein, furthermore,

R⁴ represents the radical



wherein

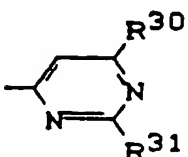
25 R²⁷ and R²⁹ are identical or different and represent hydrogen, fluorine, chlorine, bromine, C₁-C₄-alkyl [which is optionally substituted by fluorine and/or chlorine] or C₁-C₄-alkoxy [which is optionally substituted by fluorine and/or chlorine], with the proviso that at least one of the radicals

30

R²⁷ and R²⁹ is other than hydrogen, and

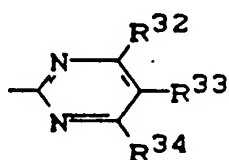
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R^{28} represents hydrogen, fluorine, chlorine, bromine, cyano or C_1 - C_4 -alkyl [which is optionally substituted by fluorine and/or chlorine]; or wherein, furthermore,

5 R^4 represents the radical 

wherein

R^{30} and R^{31} are identical or different and represent hydrogen, fluorine, chlorine, bromine, C_1 - C_4 -alkyl [which is optionally substituted by fluorine and/or chlorine], C_1 - C_4 -alkoxy [which is optionally substituted by fluorine and/or chlorine], C_1 - C_4 -alkylamino or di- $(C_1$ - C_4 -alkyl)-amino, with the proviso that at least one of the radicals R^{30} and R^{31} is other than hydrogen; 15 or wherein, furthermore,

R^4 represents the radical 

wherein

R^{32} represents hydrogen, fluorine, chlorine, bromine, hydroxyl or C_1 - C_4 -alkyl [which is optionally substituted by fluorine and/or chlorine] or C_1 - C_4 -alkoxy [which is optionally substituted by fluorine and/or chlorine], 20 R^{33} represents hydrogen, fluorine, chlorine, bromine, C_1 - C_4 -alkyl [which is optionally substituted by fluorine and/or chlorine], cyano, 25 formyl, C_1 - C_4 -alkyl-carbonyl or C_1 - C_4 -alkoxy-carbonyl and R^{34} represents hydrogen, fluorine, chlorine,

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bromine, hydroxyl, C₁-C₄-alkyl [which is optionally substituted by fluorine and/or chlorine], C₁-C₄-alkoxy [which is optionally substituted by fluorine and/or chlorine], amino, C₁-C₄-alkyl-amino or di-(C₁-C₄-alkyl)-amino, or R³³ and R³⁴ together represent C₃-C₄-alkane-diyl;

or wherein, furthermore,



10 wherein

R³⁵ and R³⁶ are identical or different and represent fluorine, chlorine, bromine, hydroxyl, C₁-C₄-alkyl [which is optionally substituted by fluorine and/or chlorine], C₃-C₅-cycloalkyl, C₁-C₄-alkoxy [which is optionally substituted by fluorine and/or chlorine] or C₁-C₄-alkylthio, or represent C₁-C₄-alkyl-amino or di-(C₁-C₄-alkyl)-amino;

and wherein, furthermore,



wherein

R³⁷ and R³⁸ are identical or different and represent hydrogen, methyl or methoxy;

and wherein, furthermore,

25 R⁵ represents C₁-C₁₂-alkyl [which is optionally substituted by fluorine, chlorine, cyano, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₁-C₄-alkylsulphinyl, C₁-C₄-alkylsulphonyl, C₁-C₄-alkyl-carbonyl, C₁-C₄-alkoxy-carbonyl, C₁-C₄-alkylaminocarbonyl or di-(C₁-C₄-alkyl)-aminocarbonyl], or represents

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ents C₃-C₆-alkenyl, C₃-C₆-alkinyl, C₃-C₆-cycloalkyl, C₃-C₆-cycloalkyl-C₁-C₂-alkyl or phenyl-C₁-C₂-alkyl [which is optionally substituted in the phenyl part by fluorine, chlorine, nitro, cyano, C₁-C₄-alkyl, C₁-C₄-alkoxy or C₁-C₄-alkoxy-carbonyl],

or wherein, furthermore,

R⁵ represents a phenyl radical which is optionally substituted by one or more radicals from the series comprising halogen [such as, in particular, fluorine, chlorine, bromine and iodine], cyano, nitro, hydroxy, carboxy, C₁-C₆-alkyl [which is optionally substituted by fluorine, chlorine, bromine, nitro, cyano, hydroxyl, carboxyl, C₁-C₄-alkoxy-carbonyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio or phenyl], C₃-C₆-cycloalkyl, C₁-C₄-alkoxy [which is optionally substituted by fluorine, chlorine, bromine, cyano, carboxy, C₁-C₄-alkoxy, C₁-C₄-alkylthio or C₁-C₄-alkoxy-carbonyl], C₁-C₄-alkylthio [which is optionally substituted by fluorine, chlorine, bromine, cyano, carboxyl, or C₁-C₄-alkoxy-carbonyl], amino, C₁-C₄-alkyl-amino and di-(C₁-C₄-alkyl)-amino [which are optionally substituted by fluorine, chlorine, bromine, cyano, carboxyl, C₁-C₄-alkoxy or C₁-C₄-alkoxy-carbonyl], C₁-C₄-alkyl-carbonylamino, C₁-C₄-alkoxy-carbonylamino, (di)-C₁-C₄-alkyl-amino-carbonyl-amino, formyl, C₁-C₄-alkyl-carbonyl, benzoyl, C₁-C₄-alkoxy-carbonyl, phenoxy-carbonyl, benzyloxycarbonyl, phenyl [which is optionally substituted by fluorine, chlorine, bromine, cyano, nitro, hydroxyl or methyl], phenoxy, phenylthio, phenylsulphonyl, phenylamino and phenylazo [which are optionally substituted by fluorine, chlorine, bromine, cyano, nitro, methyl and/or trifluoromethyl], pyridoxy and pyrimidoxy

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[which are optionally substituted by fluorine, chlorine, bromine, cyano, nitro, methyl and/or trifluoromethyl], C₁-C₄-alkyl-carbonyloxy, C₁-C₄-alkoxy-carbonyloxy, C₁-C₄-alkyl-amino-carbonyloxy and di-(C₁-C₄-alkyl)-amino-carbonyloxy, or which is optionally fused by an alkylene chain [which is optionally branched and/or interrupted by one or more oxygen atoms] or a benzo radical [which is optionally substituted by fluorine, chlorine, bromine, cyano, nitro, methyl and/or trifluoromethyl];

or wherein, furthermore,

R⁵ represents a five- or six-membered hetero-aromatic ring which contains 1 to 3 nitrogen atoms and/or an oxygen or sulphur atom and which is optionally benzo-fused and/or substituted by fluorine, chlorine, bromine, cyano, nitro, C₁-C₃-alkyl or C₁-C₃-alkoxy [the latter being optionally substituted by fluorine and/or chlorine];

and wherein, furthermore,

X represents oxygen or sulphur and

M represents hydrogen or one equivalent of sodium, potassium, magnesium, calcium, aluminium, manganese, iron, cobalt or nickel.

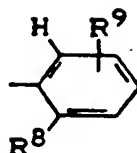
The adducts of compounds of the formula (II) - as defined above - with hydrogen halide acids, such as hydrogen fluoride, hydrogen chloride, hydrogen bromide or hydrogen iodide, with sulphuric acid, with alkanesulphonic acids which have 1 to 4 carbon atoms and are optionally substituted by fluorine and/or chlorine or benzene- or naphthalenesulphonic acids which are optionally substituted by fluorine, chlorine, bromine or methyl can furthermore preferably be used.

Herbicidal sulphonyliso(thio)urea derivatives of the formula (II) which can be particularly preferably used are those

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in which

(A) R^3 represents the radical

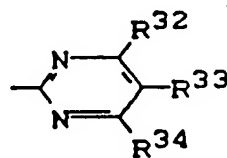


wherein

R^8 represents fluorine, chlorine, bromine, methyl, trifluoromethyl, methoxy, difluoromethoxy, trifluoromethoxy, C₁-C₃-alkylthio, difluoromethylthio, trifluoromethylthio, C₁-C₃-alkylsulphinyl, C₁-C₃-alkylsulphonyl, dimethylaminosulphonyl, diethylaminosulphonyl, N-methoxy-N-methylaminosulphonyl, phenyl, phenoxy, C₁-C₃-alkoxy-carbonyl or C₁-C₃-alkyl-aminocarbonyl and R^9 represents hydrogen;

and wherein, furthermore,

R^4 represents the radical



wherein

R^{32} represents hydrogen, fluorine, chlorine, bromine, hydroxyl, C₁-C₃-alkyl, C₁-C₃-alkoxy or difluoromethoxy,

R^{33} represents hydrogen, chlorine, bromine or methyl and

R^{34} represents C₁-C₃-alkyl, hydroxy, fluorine, chlorine, bromine or C₁-C₃-alkoxy;

and wherein, furthermore,

R^5 represents C₁-C₈-alkyl [which is optionally substituted by fluorine, chlorine, cyano, C₁-C₂-alkoxy or C₁-C₂-alkoxy-carbonyl], or represents C₃-C₄-alkenyl, C₃-C₄-alkinyl or benzyl [which is optionally substituted in the phenyl part by fluorine, chlorine, nitro, cyano, methyl, methoxy or C₁-C₂-alkoxycarbonyl], or

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5 R^5 represents a phenyl radical, which is optionally substituted by one or two radicals from the series comprising fluorine, chlorine, bromine, iodine, cyano, nitro, hydroxyl, carboxyl, C₁-C₃-alkoxy-carbonyl, C₁-C₄-alkyl, trifluoromethyl, hydroxymethyl, methoxycarbonylmethyl, phenyl-C₁-C₃-alkyl, cyclohexyl, C₁-C₃-alkoxy, trifluoromethoxy, C₁-C₃-alkylthio, trifluoromethylthio, dimethylamino, amino, acetylamino, methylamino-carbonyl, formyl, acetyl, benzoyl, phenyl, hydroxy-phenyl, phenoxy [which is optionally substituted by chlorine and/or trifluoromethyl], phenylamino, phenylazo and pyridoxy [which is optionally substituted by chlorine and/or trifluoromethyl], or
10 which is optionally benzo-fused;

15 and wherein, furthermore,

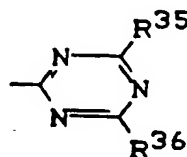
X represents oxygen or sulphur and

M represents hydrogen or one equivalent of sodium, potassium or calcium;

20 or wherein, furthermore,

(B) R^3 , R^5 , X and M have the meaning given above under (A) and

R^4 represents the radical



wherein

25 R^{35} represents fluorine, chlorine, cyclopropyl, C₁-C₂-alkyl, C₁-C₂-alkoxy or C₁-C₂-alkylthio and

R^{36} represents fluorine, chlorine, cyclopropyl, C₁-C₂-alkyl, C₁-C₂-alkoxy, C₁-C₂-alkyl-amino or di-(C₁-C₂-alkyl)-amino.
30

Adducts of compounds of the formula (I) - as defined above - with hydrogen halide acids, such as

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hydrogen chloride, hydrogen bromide and hydrogen iodide, with sulphuric acid, with alkanesulphonic acids which have 1 to 4 carbon atoms and are optionally substituted by fluorine and/or chlorine or with benzene- or naphthalene-sulphonic acids which are optionally substituted by fluorine, chlorine, bromine or methyl can furthermore be particularly preferably used.

The following compounds of the general formula (II) may be mentioned specifically:

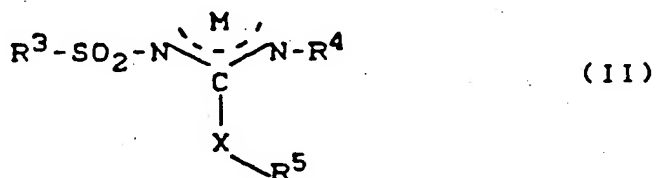


Table 2

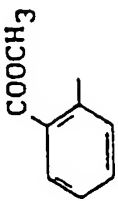
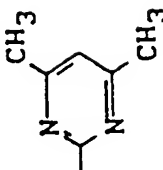
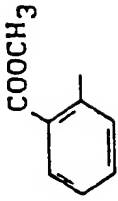
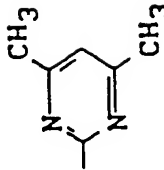
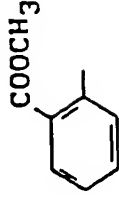
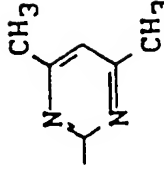
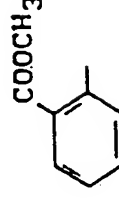
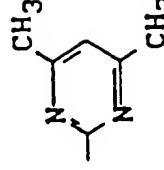
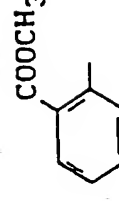
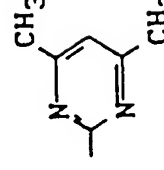
Example No.	R ³	R ⁴	R ⁵	X	M
II-1			-CH ₃	O	H
II-2			-C ₂ H ₅	O	H
II-3			-CH ₂ CF ₃	O	H
II-4			-CH ₂ CH ₂ Cl	O	H
II-5			-C ₃ H ₇ -i	O	H

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-6			-CH ₃	O	H
II-7			-CH ₃	O	H
II-8			-CH ₃	O	H
II-9			-C ₂ H ₅	O	H
II-10			-CH ₂ CH ₂ Cl	O	H

Table 2 - Continuation

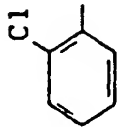
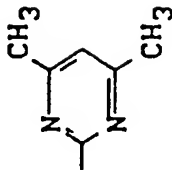
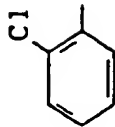
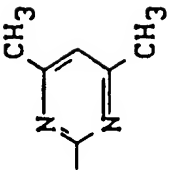
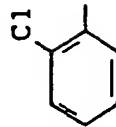
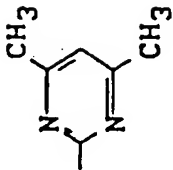
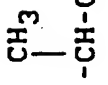
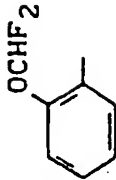
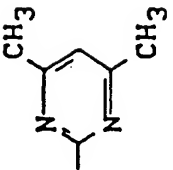
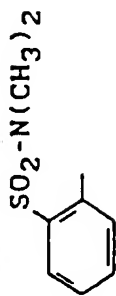
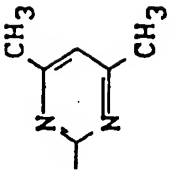
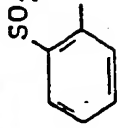
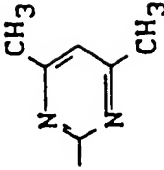
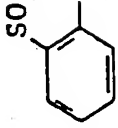
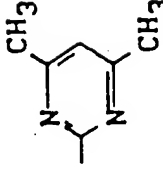
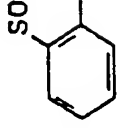
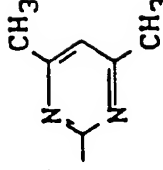
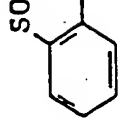
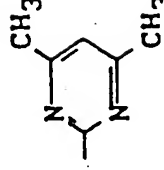
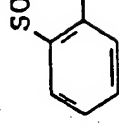
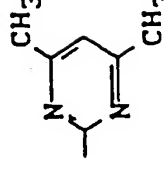
Example No.	R ³	R ⁴	R ⁵	X	M
II-11			-C ₃ H ₇ -i	O	H
II-12			-CH ₂ COOC ₂ H ₅	O	H
II-13			 -CH-COOC ₂ H ₅	O	H
II-14			-C ₂ H ₅	O	H
II-15			-CH ₃	O	H

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-16			-CH ₃	O	H
II-17			-C ₂ H ₅	O	H
II-18			-C ₂ H ₅	O	H
II-19			-CH ₃	O	H
II-20			-C ₂ H ₅	O	H

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Table 2 - Continuation

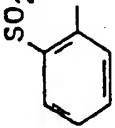
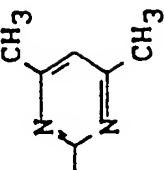
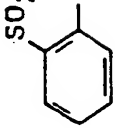
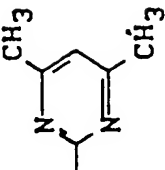
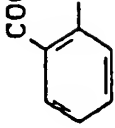
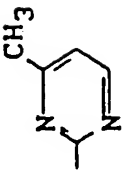
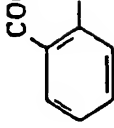
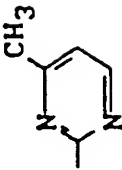
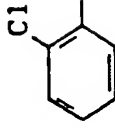
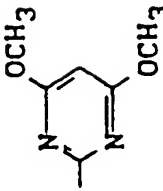
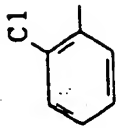
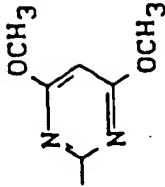
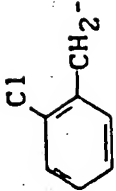
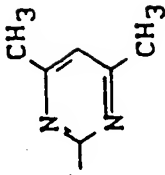
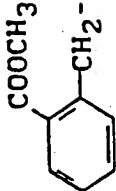
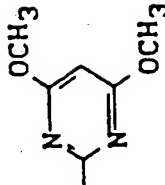
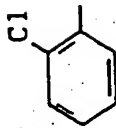
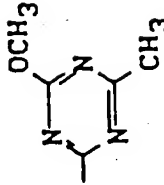
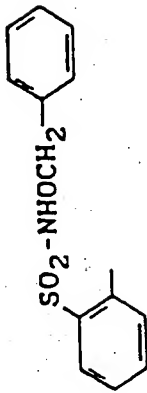
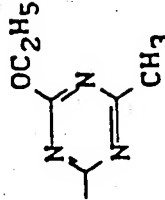
Example No.	R ³	R ⁴	R ⁵	X	M
II-21			-C ₂ H ₅	O	H
II-22			-C ₂ H ₅	O	H
II-23			-C ₂ H ₅	O	H
II-24			-C ₃ H ₇ -i	O	H
II-25			-CH ₃	O	H

Table 2 - Continuation

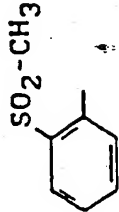
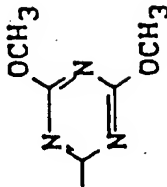
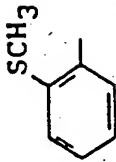
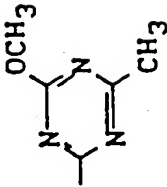
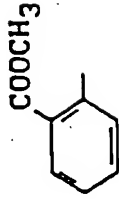
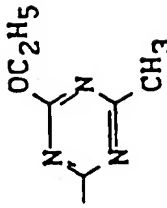
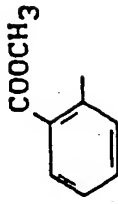
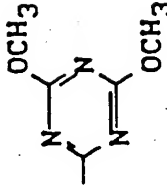
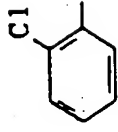
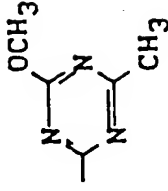
Example No.	R ³	R ⁴	R ⁵	X	M
II-26			-C ₂ H ₅	O	H
II-27			-CH ₃	O	H
II-28			-CH ₃	O	H
II-29			-CH ₃	O	H
II-30			-CH ₃	O	H

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Table 2 - Continuation.

Example No.	R ³	R ⁴	R ⁵	X	M
II-31			-C ₂ H ₅	O	H
II-32			-C ₂ H ₅	O	K
II-33			-CH ₃	O	H
II-34			-C ₂ H ₅	O	H
II-35			-CH ₃	O	H

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-36			-C ₃ H ₇ -i	O	H
II-37			-CH ₃	O	H
II-38			-CH ₃	O	H
II-39			-CH ₃	O	H
II-40			-C ₃ H ₇ -i	O	H

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Table 2 - Continuation

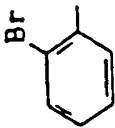
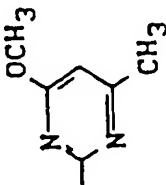
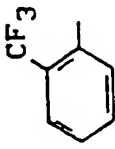
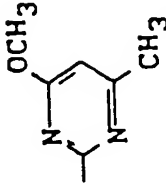
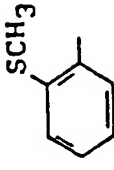
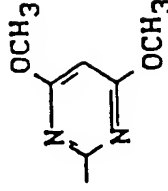
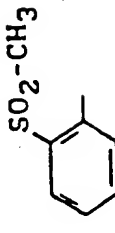
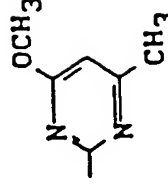
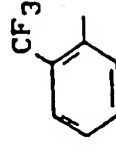
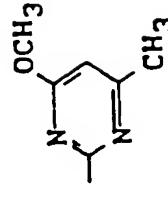
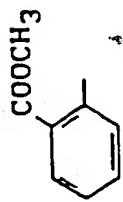
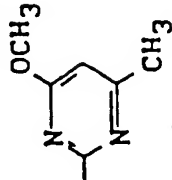
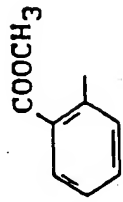
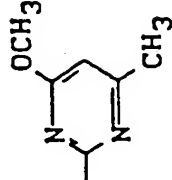
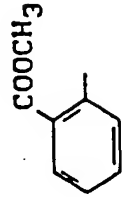
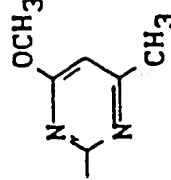
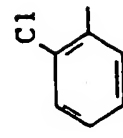
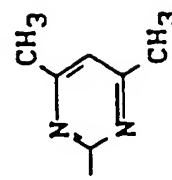
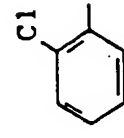
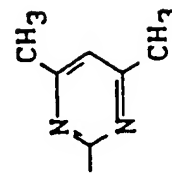
Example No.	R ³	R ⁴	R ⁵	X	M
II-41			-CH ₃	O	H
II-42			-CH ₃	O	H
II-43			-CH ₃	O	H
II-44			-CH ₃	O	H
II-45			-C ₃ H ₇ -i	O	H

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-46			-CH ₂ COOCH ₃	O	H
II-47			-CH ₂ CH=CH ₂	O	H
II-48			-CH ₂ CH ₂ OCH ₃	O	H
II-49			-CH ₃	S	H
II-50			-CH ₂ CH ₂ OH	S	H

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Table 2 - Continuation

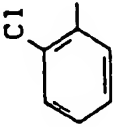
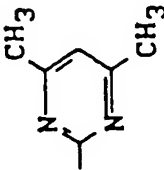
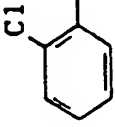
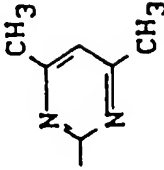
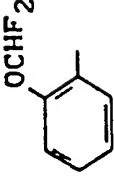
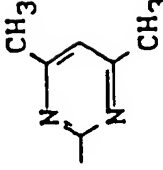

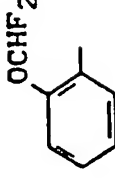
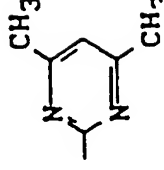
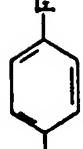
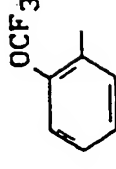
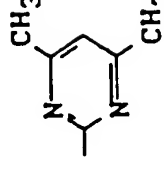
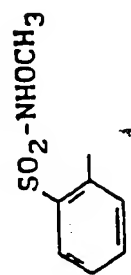
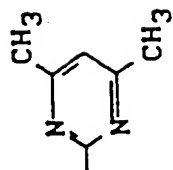
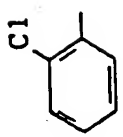
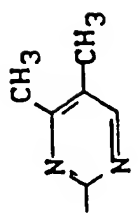
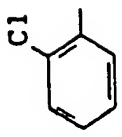
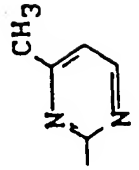
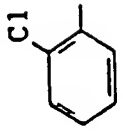
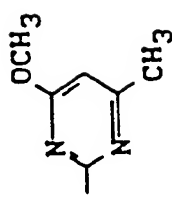
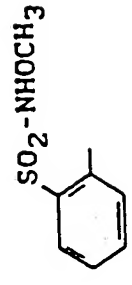
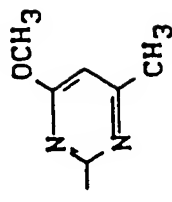
Example No.	R ³	R ⁴	R ⁵	X	M
II-51			-CH ₂ COOCH ₃	S	H
II-52			-CH ₂ CH ₂ OCH ₃	O	H
II-53			-CH ₂ 	S	H
II-54			-CH ₂ 	S	H
II-55			-CH ₃	S	H

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-56			-CH ₃	S	H
II-57			-CH ₃	S	H
II-58			-CH ₃	S	H
II-59			-CH ₃	S	H
II-60			-CH ₃	S	H

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Table 2 - Continuation

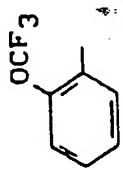
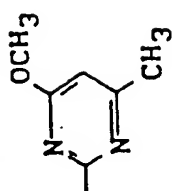
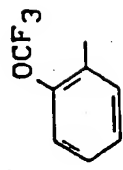
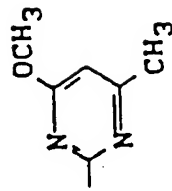
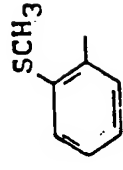
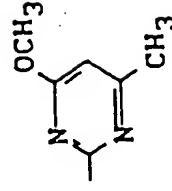
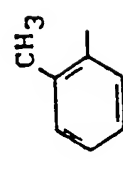
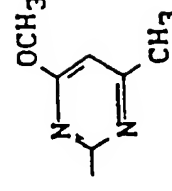
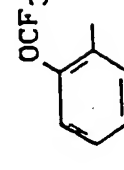
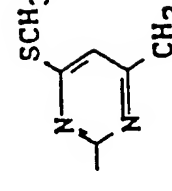
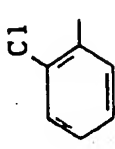
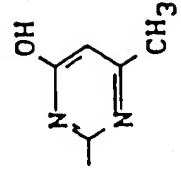
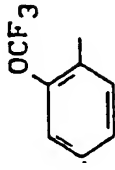
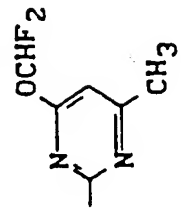
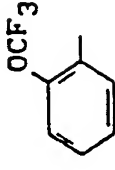
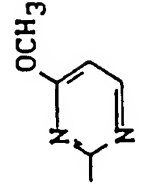
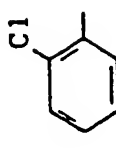
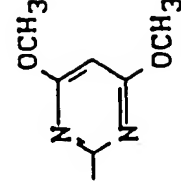
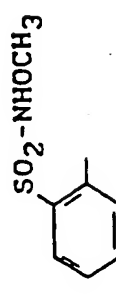
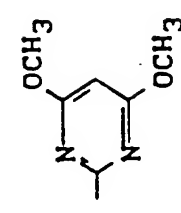
Example No.	R ³	R ⁴	R ⁵	X	M
II-61			-CH ₃	S	H
II-62			-C ₂ H ₅	S	H
II-63			-CH ₃	S	H
II-64			-CH ₃	S	H
II-65			-CH ₃	S	H

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-66			-CH ₃	S	H
II-67			-CH ₃	S	H
II-68			-CH ₃	S	H
II-69			-CH ₃	S	H
II-70			-CH ₃	S	H

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Table 2 - Continuation

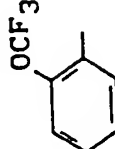
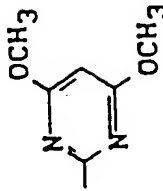
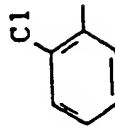
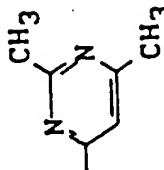
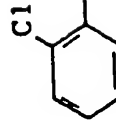
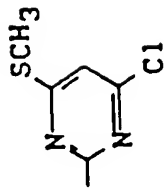
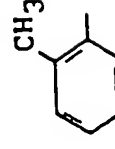
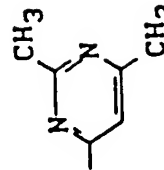
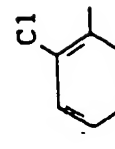
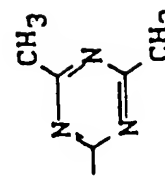
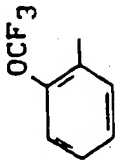
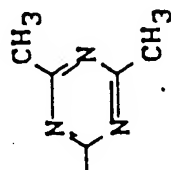
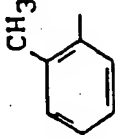
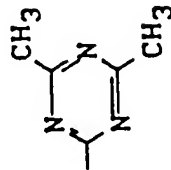
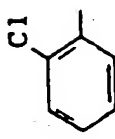
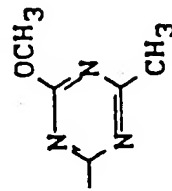
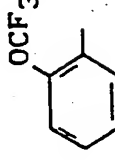
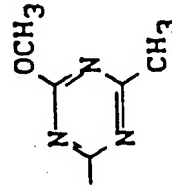
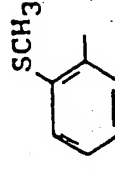
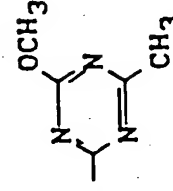
Example No.	R ³	R ⁴	R ⁵	X	M
II-71			-CH ₃	S	H
II-72			-CH ₃	S	H
II-73			-CH ₃	S	H
II-74			-CH ₃	S	H
II-75			-CH ₃	S	H

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-76			-CH ₃	S	H
II-77			-CH ₃	S	H
II-78			-CH ₃	S	H
II-79			-CH ₃	S	H
II-80			-CH ₃	S	H

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Table 2 - Continuation

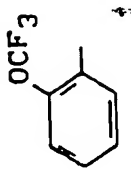
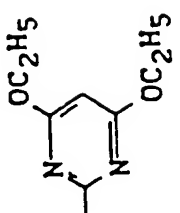
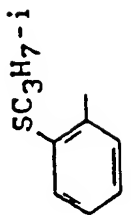
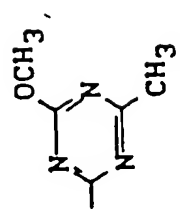
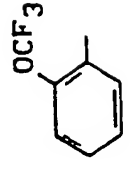
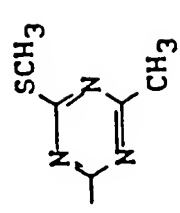
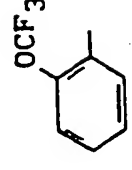
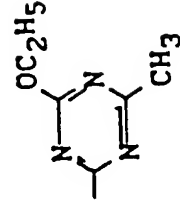
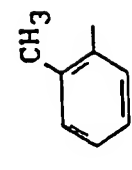
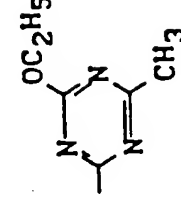
Example No.	R ³	R ⁴	R ⁵	X	M
II-81			-CH ₃	S	H
II-82			-CH ₃	S	H
II-83			-CH ₃	S	H
II-84			-CH ₃	S	H
II-85			-CH ₃	S	H

Table 2 - Continuation

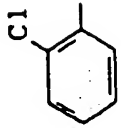
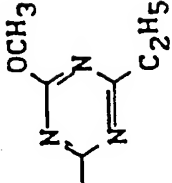
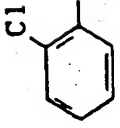
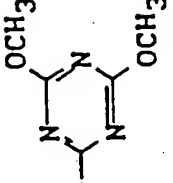
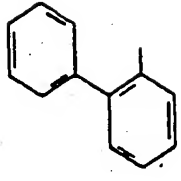
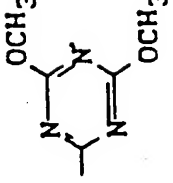
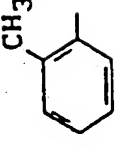
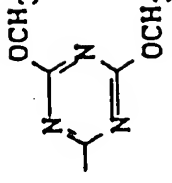
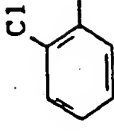
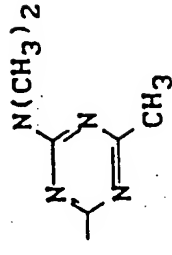
Example No.	R ³	R ⁴	R ⁵	X	M
11-86			-CH ₃	S	H
11-87			-CH ₃	S	H
11-88			-CH ₃	S	H
11-89			-CH ₃	S	H
11-90			-CH ₃	S	H

Table 2 - Continuation

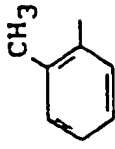
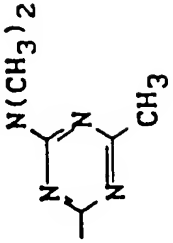
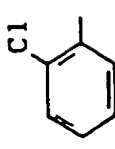
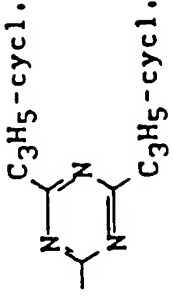
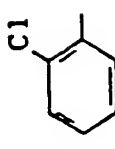
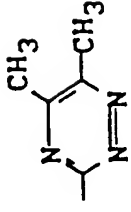
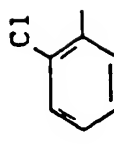
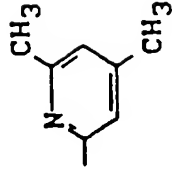
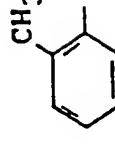
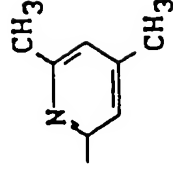
Example No.	R ³	R ⁴	R ⁵	X	M
II-91			-CH ₃	S	H
II-92			-CH ₃	S	H
II-93			-CH ₃	S	H
II-94			-CH ₃	S	H
II-95			-CH ₃	S	H

Table 2 - Continuation

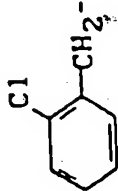
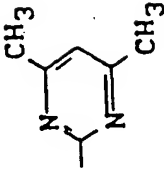
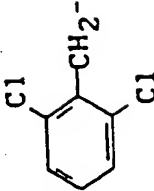
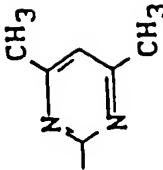
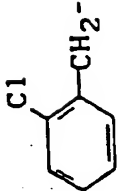
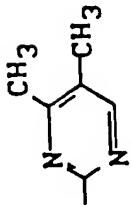
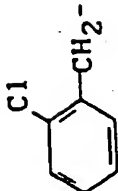
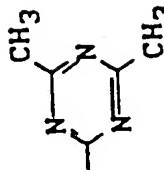
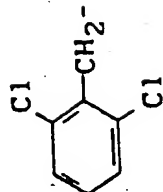
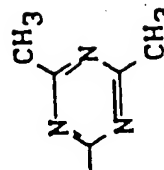
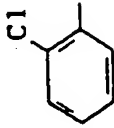
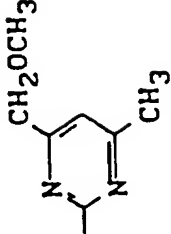
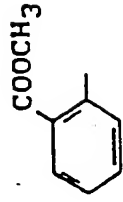
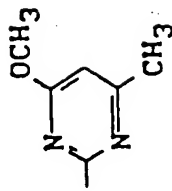
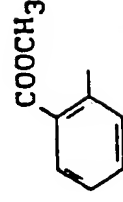
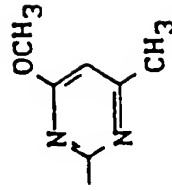
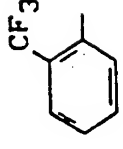
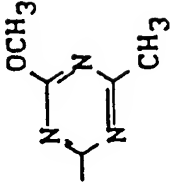
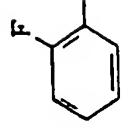
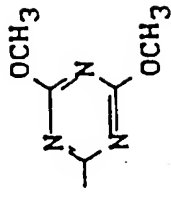
Example No.	R ³	R ⁴	R ⁵	X	M
II-96			-CH ₃	S	H
II-97			-CH ₃	S	H
II-98			-CH ₃	S	H
II-99			-CH ₃	S	H
II-100			-CH ₃	S	H

Table 2 - Continuation

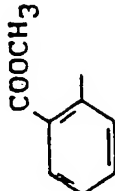
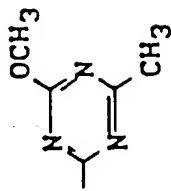
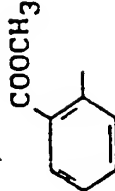
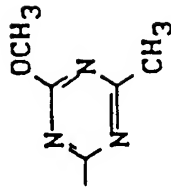
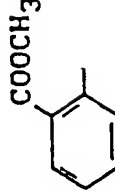
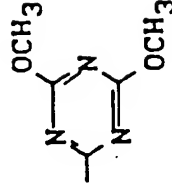
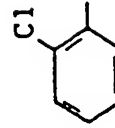
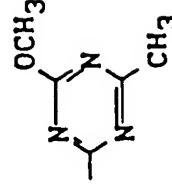
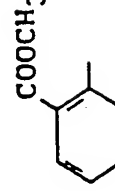
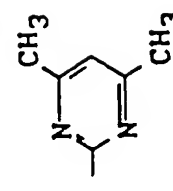

Example No.	R ³	R ⁴	R ⁵	X	M
II-101			-CH ₃	S	H
II-102			-CH ₃	S	H
II-103			-C ₂ H ₅	S	H
II-104			-C ₂ H ₅	S	H
II-105			-CH ₃	S	H

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-106			-CH ₃	S	H
II-107			-CH ₃	S	H
II-108			-CH ₂ CH=CH ₂	S	H
II-109			-CH ₃	S	H
II-110			-C ₂ H ₅	S	H

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Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-111			-CH ₃	S	H
II-112			-CH ₂ COOC ₂ H ₅	S	H
II-113			-CH ₃	S	H
II-114			-CH ₂ CH ₂ OCH ₃	S	H
II-115				O	H

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Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-116				0	H ₂ SO ₄
II-117				0	Na ⁺
II-118				0	K ⁺
II-119				0	1/2 Ca ⁺⁺
II-120				0	H

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-121				0	Na ⁺
II-122				0	H
II-123				0	2 CH ₃ SO ₃ H
II-124				0	Na ⁺
II-125				0	Na ⁺

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Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-126				O	Na ⁺
II-127				O	Na ⁺
II-128				O	H
II-129				O	Na ⁺
II-130				O	H

Table 2 - Continuation

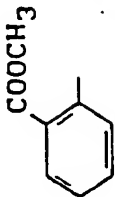
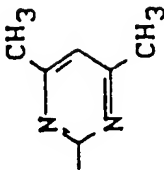

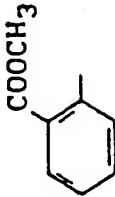
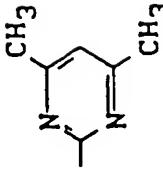

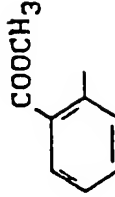
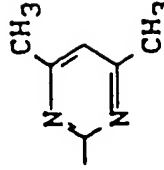

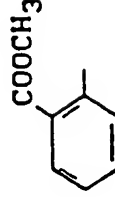
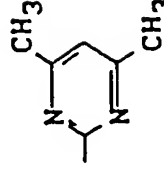
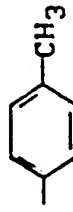
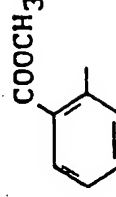
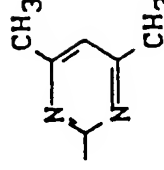
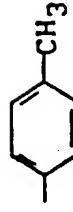
Example No.	R ³	R ⁴	R ⁵	X	M
II-131				O	Na ⁺
II-132				O	H
II-133				O	H
II-134				O	H
II-135				O	Na ⁺

Table 2 - Continuation

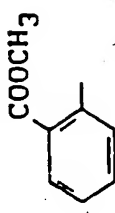
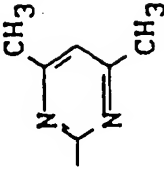
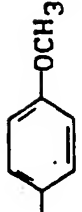
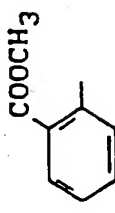
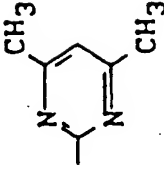
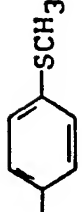
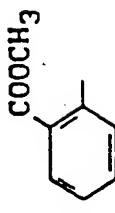
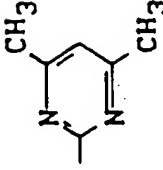
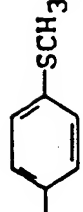
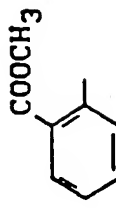
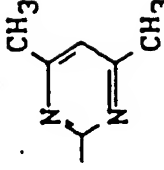
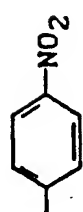
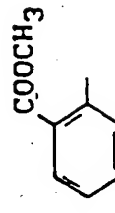
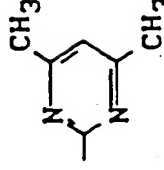
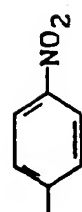
Example No.	R ³	R ⁴	R ⁵	X	M
II-136				O	K ⁺
II-137				O	H
II-138				O	Na ⁺
II-139				O	H
II-140				O	Na ⁺

Table 2 - Continuation

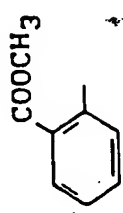
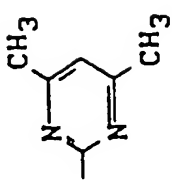
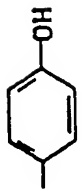
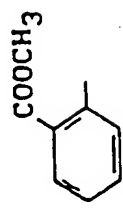
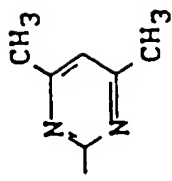
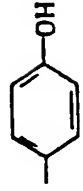
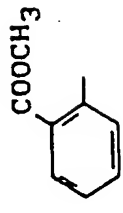
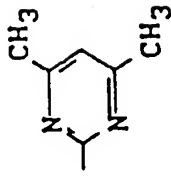
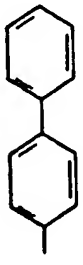
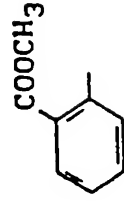
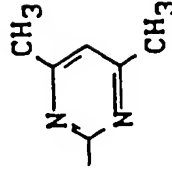
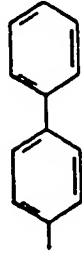
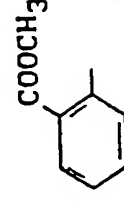
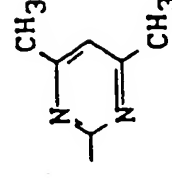
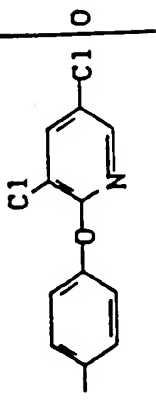
Example No.	R ³	R ⁴	R ⁵	X	M
II-141				O	H
II-142				O	Na ⁺
II-143				O	H
II-144				O	Na ⁺
II-145				O	Na ⁺

Table 2 - Continuation

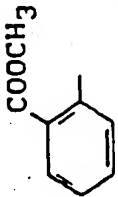
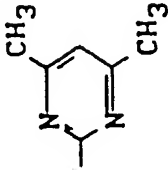
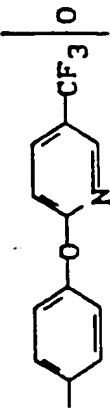

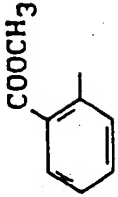
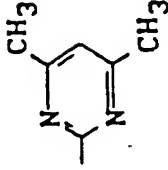
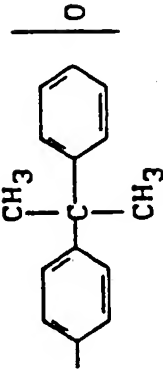

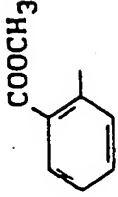
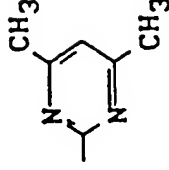


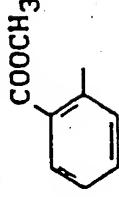
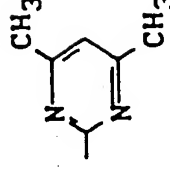
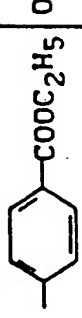

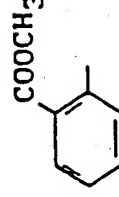
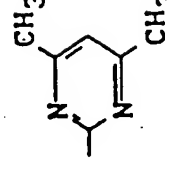


Example No.	R ³	R ⁴	R ⁵	X	M
II-146					Na ⁺
II-147					Na ⁺
II-148					Na ⁺
II-149					Na ⁺
II-150					Na ⁺

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-151				O	H
II-152				O	H
II-153				O	Na ⁺
II-154				O	Na ⁺
II-155				O	Na ⁺

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-156				O	H
II-157				O	Na ⁺
II-158				O	Na ⁺
II-159				O	H
II-160				O	Na ⁺

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Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-161				O	Na ⁺
II-162				O	Na ⁺
II-163				O	Na ⁺
II-164				O	Na ⁺
II-165				O	H

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Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-166				O	H
II-167				O	H
II-168				O	H
II-169				O	H
II-170				O	H

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Table 2 - Continuation

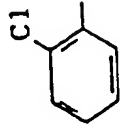
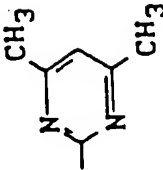

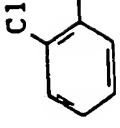
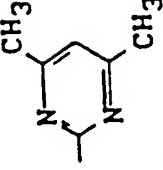
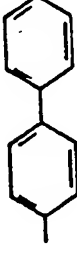
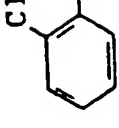
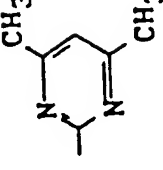
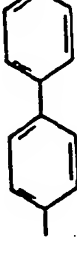
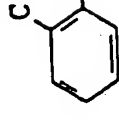
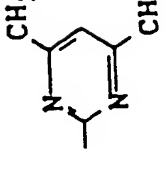

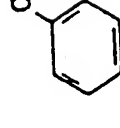
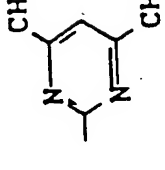

Example No.	R ³	R ⁴	R ⁵	X	M
II-171				O	H
II-172				O	H
II-173				O	Na ⁺
II-174				O	H
II-175				O	Na ⁺

Table 2 - continuation

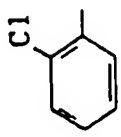
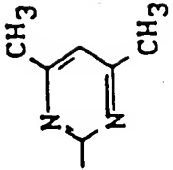
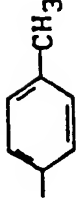
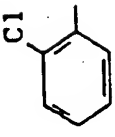
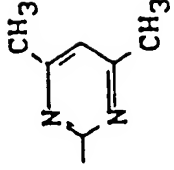
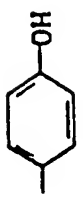
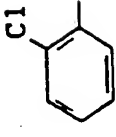
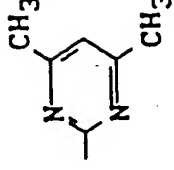

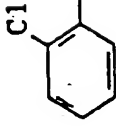
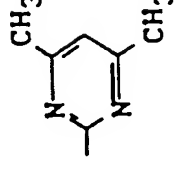
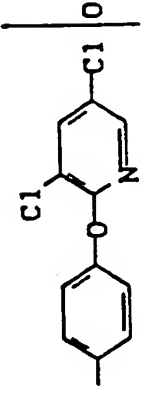
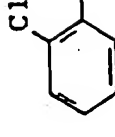
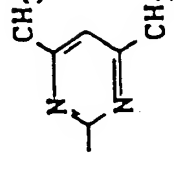
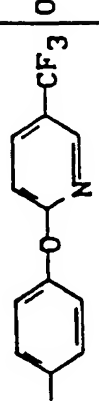
Example No.	R ³	R ⁴	R ⁵	X	M
II-176				O	Na ⁺
II-177				O	Na ⁺
II-178				O	Na ⁺
II-179				O	Na ⁺
II-180				O	Na ⁺

Table 2 - Continuation

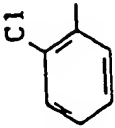
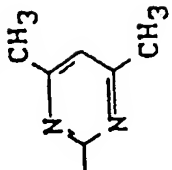
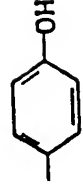
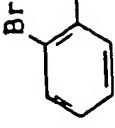
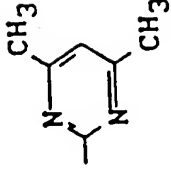

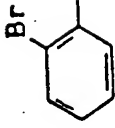
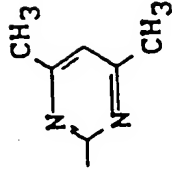
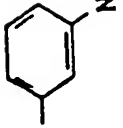
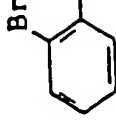
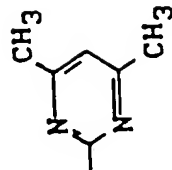
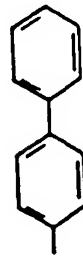
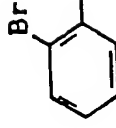
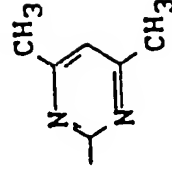
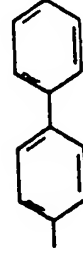
Example No.	R ³	R ⁴	R ⁵	X	M
II-181				O	H
II-182				O	H
II-183				O	Na ⁺
II-184				O	H
II-185				O	Na ⁺

Table 2 - Continuation

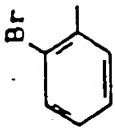
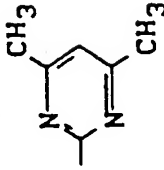

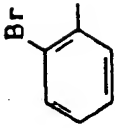
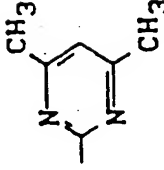

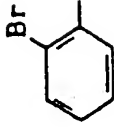
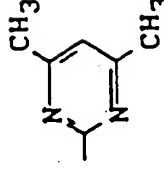
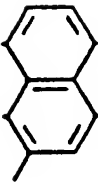
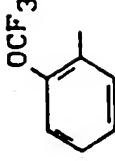
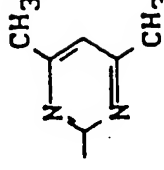
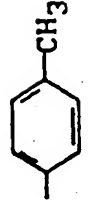
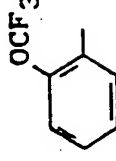
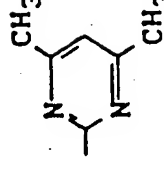
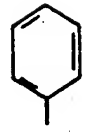
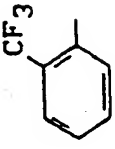
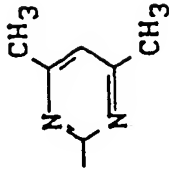


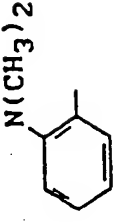
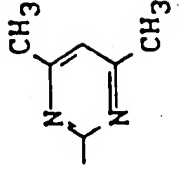

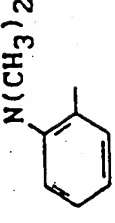
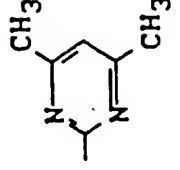

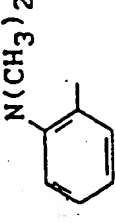
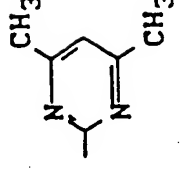

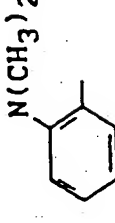
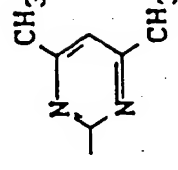


Example No.	R ³	R ⁴	R ⁵	X	M
II-186				O	H
II-187				O	K ⁺
II-188				O	K ⁺
II-189				O	H
II-190				O	H

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-191				O	H
II-192				O	Na ⁺
II-193				O	H
II-194				O	H
II-195				O	H

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-196					H
II-197				O	H
II-198				O	H
II-199				O	H
II-200					H

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Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-201				O	H
II-202				O	Na ⁺
II-203				O	H
II-204				O	H
II-205				O	H

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-206				O	H
II-207				O	H
II-208				O	H
II-209				O	H
II-210				O	H

Table 2 - Continuation

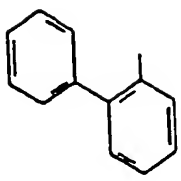
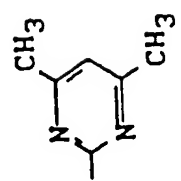

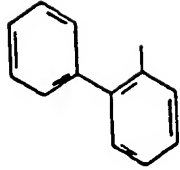
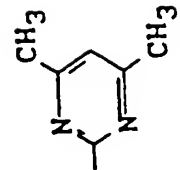
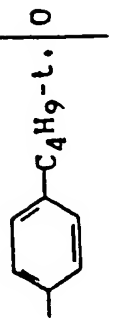

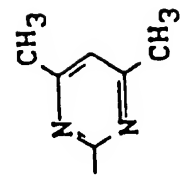


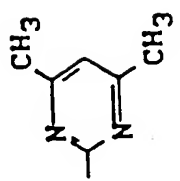
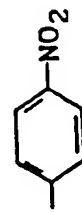
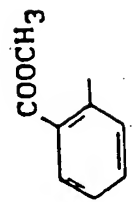
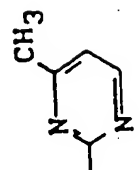

Example No.	R ³	R ⁴	R ⁵	X	M
II-211				O	H
II-212				O	H
II-213				O	H
II-214				O	H
II-215				O	H

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-216				O	H
II-217				O	H
II-218				O	H
II-219				O	H
II-220				O	H
II-221				O	H

Table 2 - Continuation

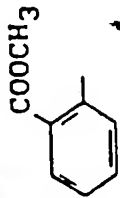
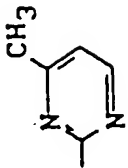
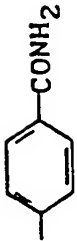
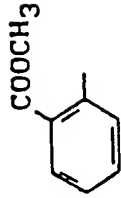
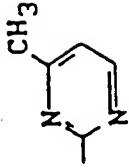

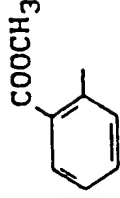
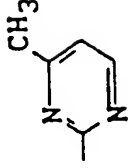
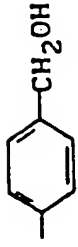
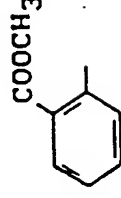
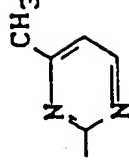
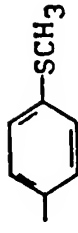
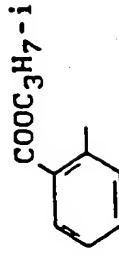
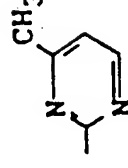
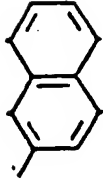
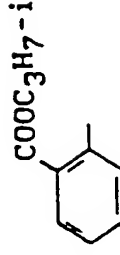
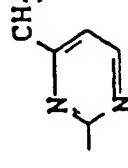

Example No.	R ³	R ⁴	R ⁵	X	M
II-222				O	Na ⁺
II-223				O	Na ⁺
II-224				O	Na ⁺
II-225				O	Na ⁺
II-226				O	H
II-227				O	Na ⁺

Table 2 - Continuation

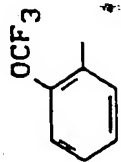
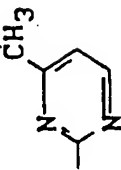


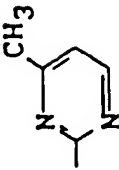
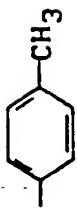
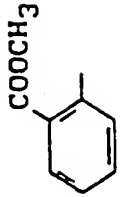
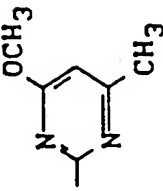
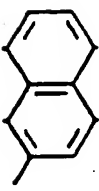
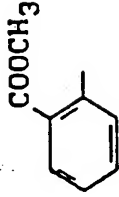
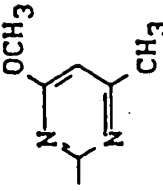

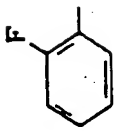
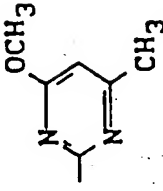
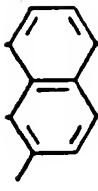
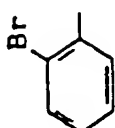
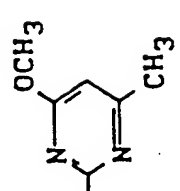

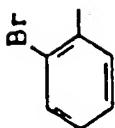
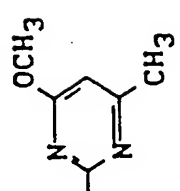
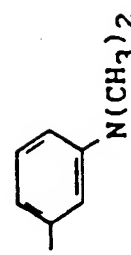
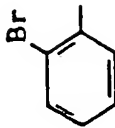
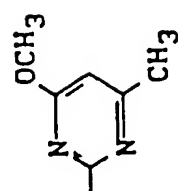
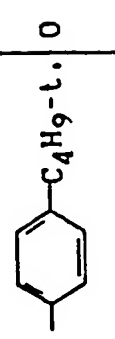
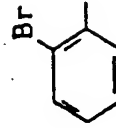
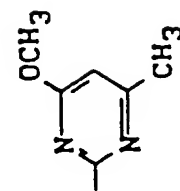
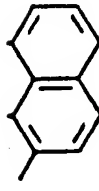
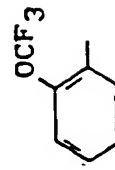
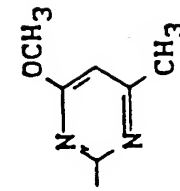

Example No.	R ³	R ⁴	R ⁵	X	M
II-228				O	H
II-229				O	H
II-230				O	H
II-231				O	H
II-232				O	H

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-233				O	H
II-234				O	H
II-235				O	H
II-236				O	H
II-237				O	H

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Table 2 - Continuation

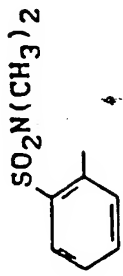
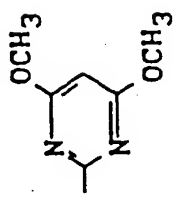
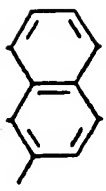
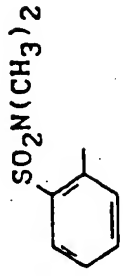
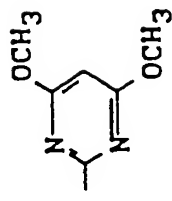
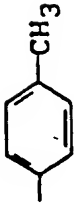
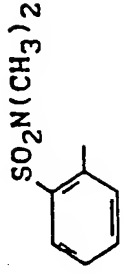
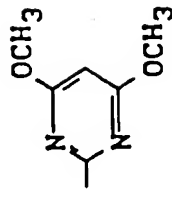
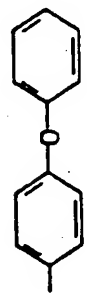
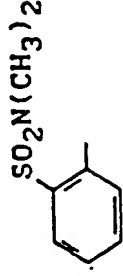
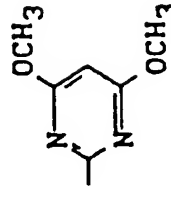
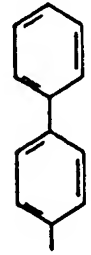
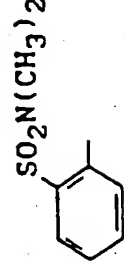
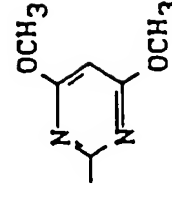
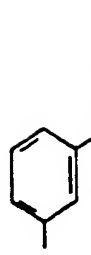
Example No.	R ³	R ⁴	R ⁵	X	H
II-238				O	H
II-239				O	H
II-240				O	H
II-241				O	H
II-242				O	H

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Table 2 - Continuation

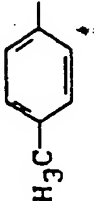
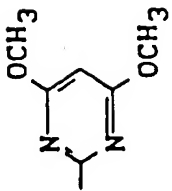

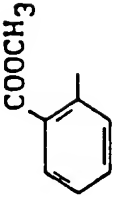
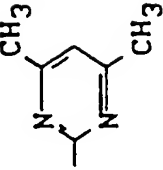

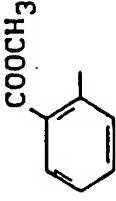
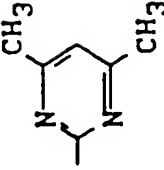
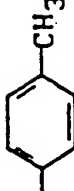
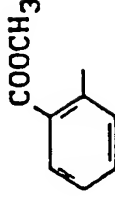
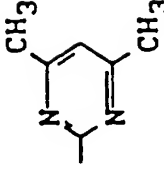
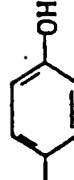
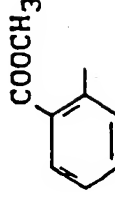
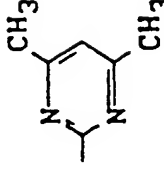

Example No.	R ³	R ⁴	R ⁵	X	M
II-243				O	H
II-244				O	H
II-245				O	H
II-246					H
II-247				O	H

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-248				O	Na ⁺
II-249				O	H
II-250				O	H
II-251				O	H
II-252				O	H

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Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-253				O	H
II-254				S	H
II-255				S	H
II-256				S	H
II-257				S	Na ⁺

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Table 2 - Continuation

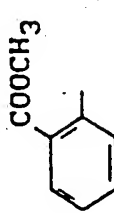
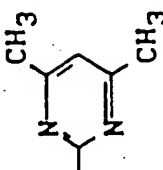

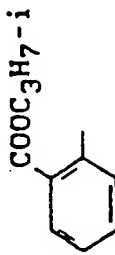
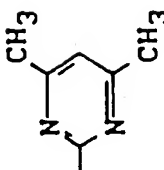

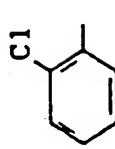
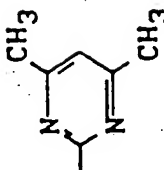

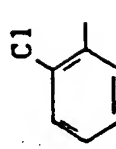
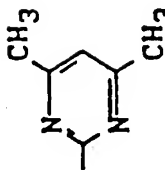
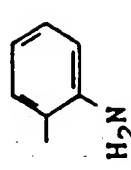
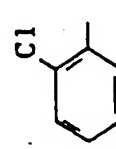
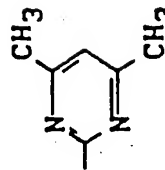
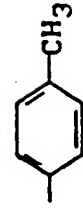
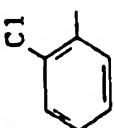
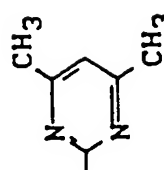
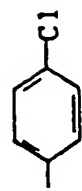
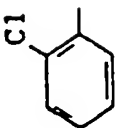
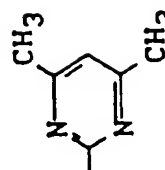
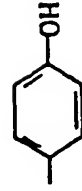
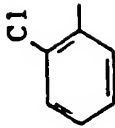
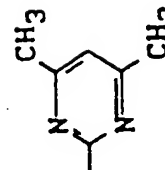
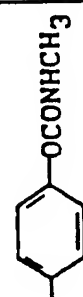
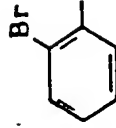
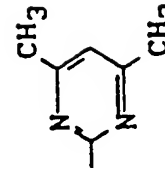
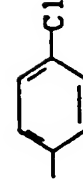
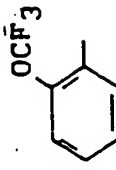
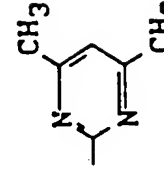

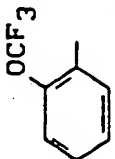
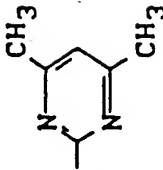

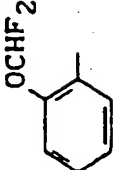
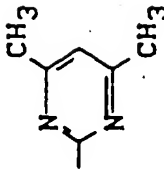

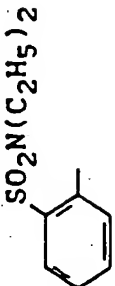
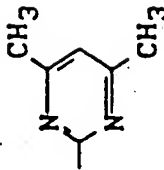

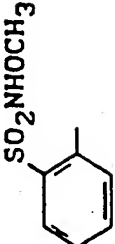
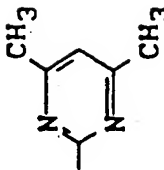


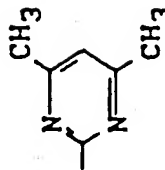

Example No.	R ³	R ⁴	R ⁵	X	M
II-258				S	H
II-259				S	H
II-260				S	H
II-261				S	H
II-262				S	H

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-263				S	H
II-264				S	H
II-265				S	H
II-266				S	H
II-267				S	H

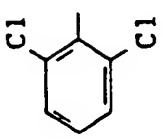
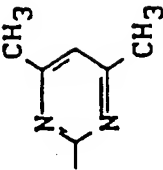

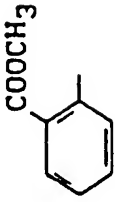
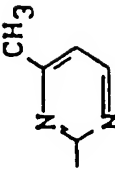

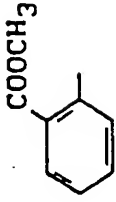
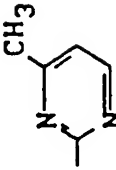

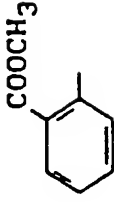
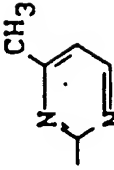

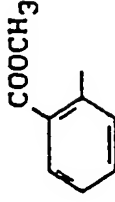
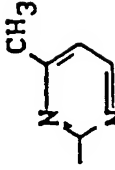
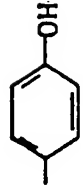
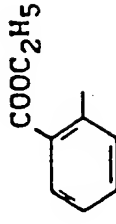
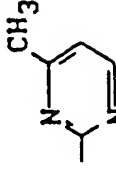
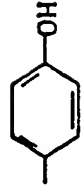
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Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-268				S	H
II-269				S	H
II-270				S	H
II-271				S	H
II-272				S	H

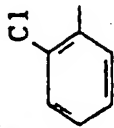
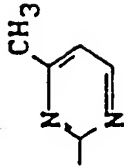

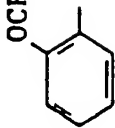
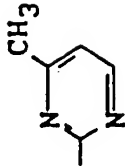


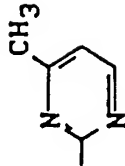

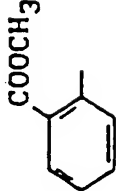
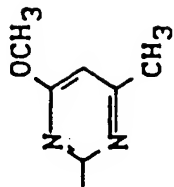
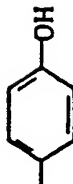
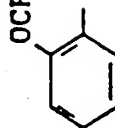
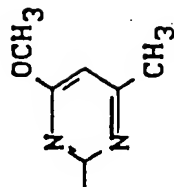

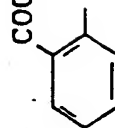
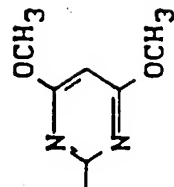

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Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-273				S	H
II-274				S	H
II-275				S	H
II-276				S	H
II-277				S	H
II-278				S	H

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Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-279				S	Na ⁺
II-280				S	H
II-281				S	H
II-282				S	H
II-283				S	H
II-284				S	H

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Table 2 - Continuation

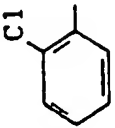
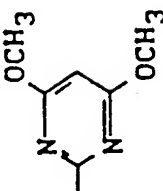

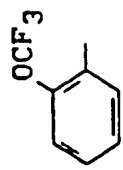
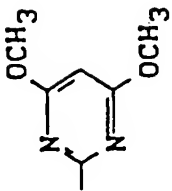

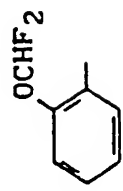
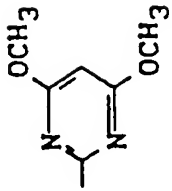

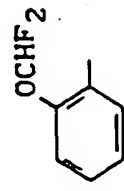
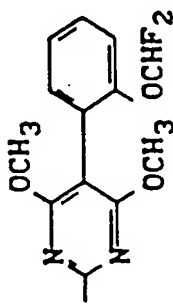

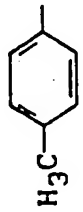
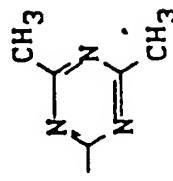

Example No.	R ³	R ⁴	R ⁵	X	M
II-285				S	H
II-286				S	H
II-287				S	H
II-288				S	H
II-289				S	H

Table 2 - Continuation

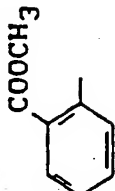
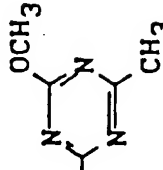
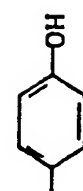
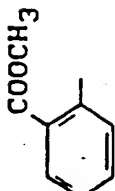
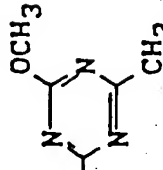
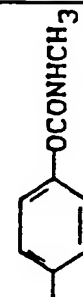
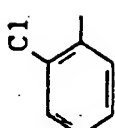
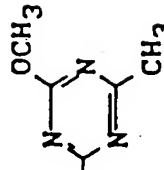
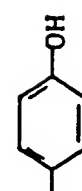
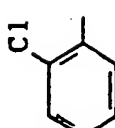
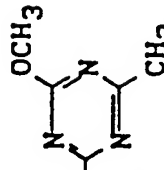
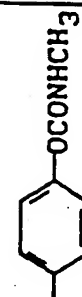
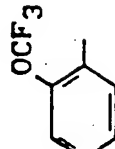
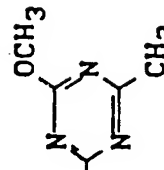
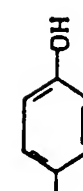
Example No.	R ³	R ⁴	R ⁵	X	M
II-290				S	H
II-291				S	H
II-292				S	H
II-293				S	H
II-294				S	H

Table 2 - Continuation

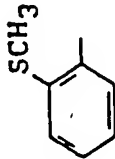
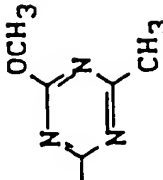
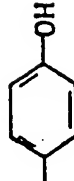
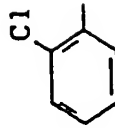
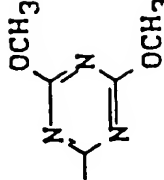

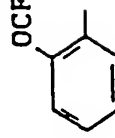
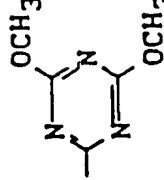

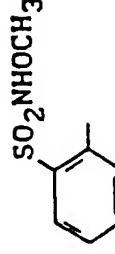
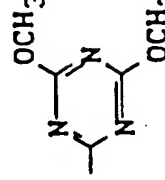

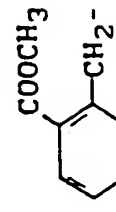
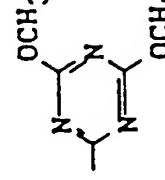
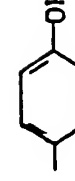
Example No.	R ³	R ⁴	R ⁵	X	M
II-295				S	H
II-296				S	H
II-297				S	H
II-298				S	H
II-299				S	H

Table 2 - Continuation

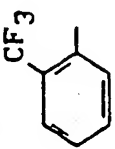
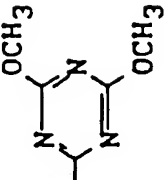

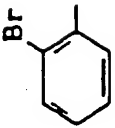
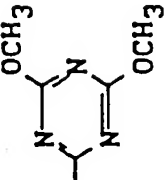

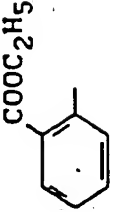
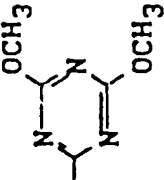
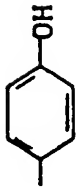
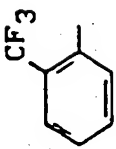
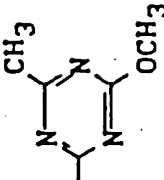
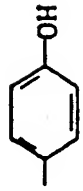
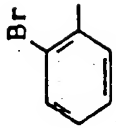
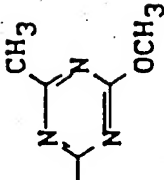
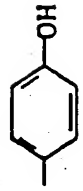
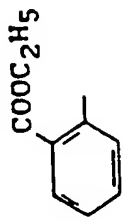
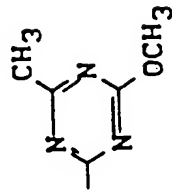

Example No.	R ³	R ⁴	R ⁵	X	M
II-300				S	H
II-301				S	H
II-302				S	H
II-303				S	H
II-304				S	H

Table 2 - Continuation

Example No.	R ³	R ⁴	R ⁵	X	M
II-305				S	H

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The sulphonyliso(thio)urea derivatives of the formula (II) which can be used according to the invention are known and/or can be prepared by methods which are known per se (compare, for example, Swiss Patent Specification 646,957, European Patent A-5,986, European Patent A-24,215, European Patent A-173,311, European Patent A-173,316, European Patent A-173,321 and European Patent A-173,957).

The amides of the formula (I) which can be used according to the invention as antidotes are particularly suitable for improving the tolerance of herbicidally active sulphonyliso(thio)urea derivatives of the formula (II) in important crop plants, such as maize, soyabean, cotton, sugar beet, cereals, rice and sugar cane, in particular maize.

The active compound combinations according to the invention exhibit a very good action against broad-leaved weeds and gramineous weeds in numerous crops of useful plants. They can therefore be used for selectively combating weeds in numerous crops of useful plants. By weeds, in the broadest sense, there are to be understood all plants which grow in locations where they are undesired.

The active compound combinations according to the invention can be used, for example, in connection with the following plants:

Dicotyledon weeds of the genera: Sinapis, Lepidium, Galium, Stellaria, Matricaria, Anthemis, Galinsoga, Chenopodium, Urtica, Senecio, Amaranthus, Portulaca, Xanthium, Convolvulus, Ipomoea, Polygonum, Sesbania, Ambrosia, Cirsium, Carduus, Sonchus, Solanum, Rorippa, Rotala, Lindernia, Lamium, Veronica, Abutilon, Emex, Datura, Viola, Galeopsis, Papaver and Centaurea.

Dicotyledon cultures of the genera: Gossypium, Glycine, Beta, Daucus, Phaseolus, Pisum, Solanum, Linum, Ipomoea, Vicia, Nicotiana, Lycopersicon, Arachis, Brassica, Lactuca, Cucumis and Cucurbita.

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Monocotyledon weeds of the genera: Echinochloa, Setaria, Panicum, Digitaria, Phleum, Poa, Festuca, Eleusine, Brachiaria, Lolium, Bromus, Avena, Cyperus, Sorghum, Agropyron, Cynodon, Monochoria, Fimbristylis, Sagittaria, Eleocharis, Scirpus, Paspalum, Ischaemum, Sphenoclea, Dactyloctenium, Agrostis, Alopecurus and Apera:

Monocotyledon cultures of the genera: Oryza, Zea, Triticum, Hordeum, Avena, Secale, Sorghum, Panicum, Saccharum, Ananas, Asparagus and Allium.

However, the use of the active compound combinations according to the invention is in no way restricted to these genera, but also extends in the same manner to other plants.

The active compound combinations according to the invention are particularly suitable for selectively combating weeds in maize.

The selective herbicidal activity of the active compound combinations according to the invention is particularly pronounced if the herbicidal active compound and antidote are present in certain ratios. However, the weight ratios of herbicidal active compound to antidote in the active compound combinations according to the invention can vary within relatively wide limits. In general, 0.01 to 100 parts by weight, preferably 0.1 to 20 parts by weight, of an antidote of the formula (I) are present per part by weight of herbicidal active compound of the formula (II).

The antidotes of the formula (I) which can be used according to the invention or the active compound combinations according to the invention of an antidote of the formula (I) and a herbicidal active compound of the formula (II) can be converted to the customary formulations, such as solutions, emulsions, wettable powders, suspensions, powders, dusting agents, pastes, soluble powders, granules, suspension-emulsion concentrates, natural and synthetic materials impregnated with active compound, and very fine capsules in polymeric materials.

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These formulations are produced in known manner, for example by mixing the active compounds with extenders, that is liquid solvents and/or solid carriers, optionally with the use of surface-active agents, that is emulsifying agents and/or dispersing agents and/or foam-forming agents.

In the case of the use of water as an extender, organic solvents can, for example, also be used as auxiliary solvents. As liquid solvents, there are suitable in the main: aromatics, such as xylene, toluene or alkyl naphthalenes, chlorinated aromatics and chlorinated aliphatic hydrocarbons, such as chlorobenzenes, chloroethylenes or methylene chloride, aliphatic hydrocarbons, such as cyclohexane or paraffins, for example petroleum fractions, mineral and vegetable oils, alcohols, such as butanol or glycol as well as their ethers and esters, ketones, such as acetone, methyl ethyl ketone, methyl isobutyl ketone or cyclohexanone, strongly polar solvents, such as dimethylformamide and dimethylsulphoxide, as well as water.

As solid carriers there are suitable: for example ammonium salts and ground natural minerals, such as kaolins, clays, talc, chalk, quartz, attapulgite, montmorillonite or diatomaceous earth, and ground synthetic minerals, such as highly disperse silicic acid, alumina and silicates, as solid carriers for granules there are suitable: for example crushed and fractionated natural rocks such as calcite, marble, pumice, sepiolite and dolomite, as well as synthetic granules of inorganic and organic meals, and granules of organic material such as sawdust, coconut shells, maize cobs and tobacco stalks; as emulsifying and/or foam-forming agents there are suitable: for example non-ionic and anionic emulsifiers, such as polyoxyethylene-fatty acid esters, polyoxyethylene-fatty alcohol ethers, for example alkylaryl polyglycol ethers, alkylsulphonates, alkylsulphates, arylsulphonates as well

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as albumin hydrolysis products; as dispersing agents there are suitable: for example lignin-sulphite waste liquors and methylcellulose.

Adhesives such as carboxymethylcellulose and
5 natural and synthetic polymers in the form of powders, granules or latices, such as gum arabic, polyvinyl alcohol and polyvinyl acetate, as well as natural phospholipids, such as cephalins and lecithins, and synthetic phospholipids, can be used in the formulations. Further
10 additives can be mineral and vegetable oils.

It is possible to use colorants such as inorganic pigments, for example iron oxide, titanium oxide and Prussian Blue, and organic dyestuffs, such as alizarin
15 dyestuffs, azo dyestuffs and metal phthalocyanine dyestuffs, and trace nutrients such as salts of iron, manganese, boron, copper, cobalt, molybdenum and zinc.

The formulations in general contain between 0.1 and 95 per cent by weight of an antidote which can be used according to the invention or of an active compound combination according to the invention of antidote and herbicidal active compound, and they preferably contain between
20 0.5 and 90 per cent by weight.

The antidotes which can be used according to the invention or the active compound combinations according
25 to the invention, as such or in their formulations, can also be used, for combating weeds, as a mixture with known herbicides, a finished formulation or tank mix being possible. Mixtures with known active compounds, such as fungicides, insecticides, acaricides, nematocides, bird
30 repellants, growth factors, plant nutrients and agents for improving soil structure is also possible.

The antidotes which can be used according to the invention or the active compound combinations according to the invention can be used as such or in the form of
35 their formulations or in the use forms prepared therefrom by further dilution, such as ready-to-use solutions, suspen-

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sions, emulsions, powders and granules. They are used in the customary manner, for example by watering, spraying, atomizing, dusting, scattering, dry dressing, moist dressing, wet dressing, slurry dressing or encrusting.

5 The antidotes which can be used according to the invention can be applied by the methods customary for such antidotes. Thus, the antidotes which can be used according to the invention can be applied before or after the herbicide or applied together with the herbicide.
10 Furthermore, crop plants can be protected from damage by seed treatment with the antidote before sowing (dressing) if the herbicide is used before or after sowing. Another possible use comprises applying the antidote to the seed furrow during sowing. If the plants are seedlings, these
15 can be treated with the antidote before being transplanted.

 The amount of antidote applied is in principle independent of the herbicide and the amount of herbicidal active compound applied. The amounts of antidote applied are in general between 0.02 and 20 kg/ha, preferably between 0.05 and 5 kg/ha, for surface treatment. In the case
20 of seed treatment, the amounts of antidote applied for surface treatment are between 0.2 and 200 g per kilogram of seed, preferably between 0.5 and 50 g per kilogram of seed. The amounts of active compound combinations according to the invention applied can be varied within a
25 certain range. They are in general between 0.001 and 25 kg/ha, preferably between 0.01 and 5 kg/ha.

 The amounts of herbicidal active compound applied in general vary between 0.001 and 20 kg/ha, preferably
30 between 0.01 and 2 kg/ha.

Use Examples

Preparation of the active compound solutions required

 In each case a stock solution was prepared from the amounts of herbicidal active compound or antidote
35 required for the experiment. For this, technical grade active compounds were dissolved with a few millilitres

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(3 - 5) of the solvent mentioned, 1 drop of emulsifier "Tween 20" was added and the mixture was further diluted with water, and formulated active compounds were dispersed directly in water. The active compound solutions for treatment of the test plant seeds in the experiment vessels were then prepared from these stock solutions by further dilution with water and if appropriate by mixing, so that the particular solution contained the desired amount of herbicidal active compound or antidote. The volume of active compound solution applied per unit area in the experiments was kept constant.

Use of the antidote and herbicidal active compounds:

The active compound was applied to the seeds of the test plants by the tank mix method. For this, the experiment vessels filled with soil in which the seeds of the test plants were sown were watered with the amount of antidote to be applied, mixed with the herbicide; vessels which had been treated only with water or herbicide served as control variants.

The experiment vessels were then kept in a greenhouse under controlled conditions (temperature, humidity). After two weeks, the experiments were evaluated in the form of visual rating, the damage to the test plants in comparison with the untreated control plants being evaluated according to a scale from 0 (no damage, like untreated control) to 100 (total damage).

The test compounds, the amounts thereof applied, the test plants and the test results can be seen from the following table:

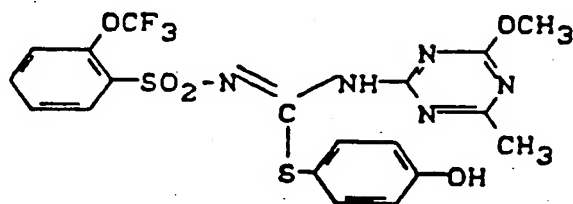
Pre-emergence test / greenhouse

Test compounds / Table 1

The following active compounds were employed as test compounds in the experiments described in the following Tables 1 and 2, the formulations used also being shown:

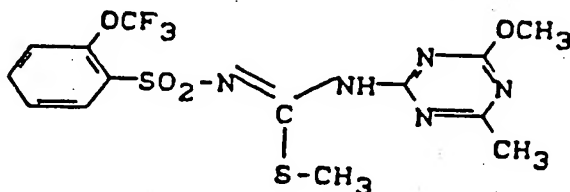
Herbicides:

Herbicide (II-294)



10 Formulation: Technical grade active compound, solvent dimethylformamide

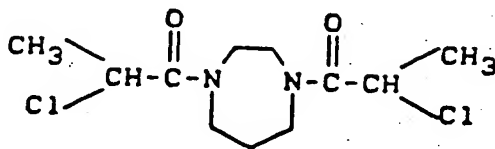
Herbicide (II-79)



15 Formulation: Technical grade active compound, solvent dimethylformamide

Antidotes:

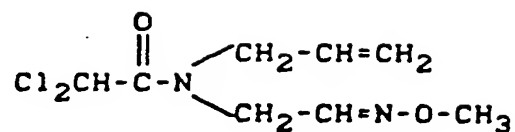
Antidote (I-475)



20 Formulation: 350 EC, that is to say emulsion concentrate with 350 g of antidote per litre

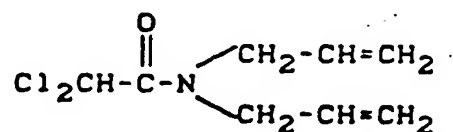
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Antidote (I-273)



Formulation: 500 EC, that is to say emulsion concentrate
with 500 g of antidote per litre

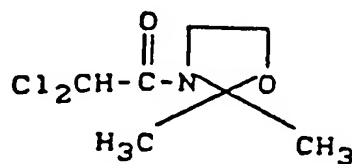
5 Antidote (I-271)



Formulation: 750 EC, that is to say emulsion concentrate
with 750 g of antidote per litre

Antidote (I-369)

10



Formulation: technical grade active compound, solvent
acetone

Table A Testing on maize, use of the antidote by the tank mix method

Test compounds	Amount applied Rating: Damage in %					
	1000 g / ha 70 %		500 g / ha 50 %		250 g / ha 30 %	
Herbicide (II-79)	1000 g / ha + 1000 g	1000 g / ha + 200 g	500 g / ha + 500 g	500 g / ha + 100 g	250 g / ha + 250 g	250 g / ha + 50 g 1000 g
Herbicide (II-79) + Antidote (a), (b), (c) or (d)	10 %	30 %	10 %	20 %	0	0
(a) (I-273)						
(b) (I-475)	20 %	40 %	10 %	20 %	10 %	0
(c) (I-271)	10 %	50 %	0	20 %	0	0
(d) (I-369)	20 %	20 %	0	20 %	0	0

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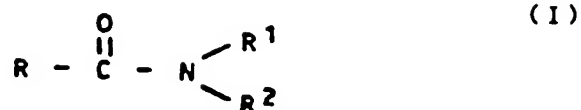
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Table A - Continuation
Testing on maize, use of the antidote by the tank mix method

Test compounds	Amount applied Rating: Damage in %							
	500 g / ha 60 %		250 g / ha 40 %		125 g / ha 20 %		125 g / ha 20 %	
Herbicide (II-294)	500 g / ha	500 g / ha	250 g / ha	250 g / ha	125 g / ha	125 g / ha	125 g / ha	125 g / ha
Herbicide (II-294) + Antidote (a), (b), (c) or (d)	500 g / ha	500 g / ha	250 g / ha	250 g / ha	125 g / ha	125 g / ha	125 g / ha	125 g / ha
(a) (I-273)	20 %	30 %	20 %	20 %	20 %	10 %	20 %	0
(b) (I-475)	30 %	20 %	20 %	10 %	10 %	10 %	20 %	0
(c) (I-271)	30 %	40 %	30 %	30 %	10 %	10 %	20 %	0
(d) (I-369)	10 %	10 %	0	0	0	0	0	0

Patent Claims

1. Use of amides of the formula (I):

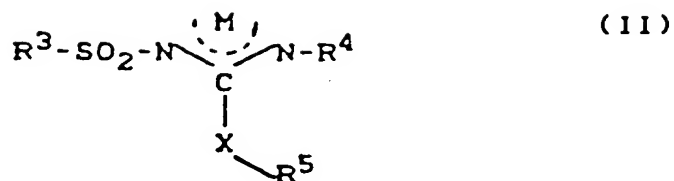


in which

R represents hydrogen or halogen, or represents in each case optionally substituted alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, bicycloalkyl, bicycloalkenyl, tricycloalkyl, aryl, heteroaryl, alkoxy, alkenyloxy, alkynyloxy, aryloxy, carbamoyl, alkoxycarbonyl or dithiolanyl and R¹ and R² independently of one another in each case represent hydrogen, or represent formyl, or represent chlorosulphonyl, or represent in each case optionally substituted alkyl, alkenyl, alkadienyl, alkynyl, cycloalkyl, cycloalkenyl, alkoxy, alkylthio, alkylcarbonyl, alkoxycarbonyl, phenyl, phenoxy, phenylsulphonyl or heterocyclyl, or represent amino, or represent alkylideneimino, or represent optionally substituted alkylcarbonylamino or di-(alkylcarbonyl)amino, or R¹ and R², together with the nitrogen atom to which they are bonded, represent in each case optionally substituted alkylideneimino, pyrrolidinyl, piperidinyl, piperidonyl, perhydroazepinyl, perhydroazocinyl, dihydropyrazolyl, dihydro- or tetrahydropyridinyl, azabicyclononyl, morpholinyl, perhydro-1,3-oxazinyl, 1,3-oxazolidinyl, 1,4-piperazinyl, perhydro-1,4-diazepinyl, dihydro-, tetrahydro- or perhydroquinolyl- or -isoquinolyl, indolyl or dihydro- or perhydroindolyl,

as an antidote for improving the crop plant tolerance of herbicidally active sulphonyliso(thio)urea derivatives of the formula (II)

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in which

R^3 represents an optionally substituted radical from the series comprising alkyl, aralkyl, aryl and heteroaryl,

R^4 represents a six-membered aromatic heterocyclic radical which is optionally substituted and/or optionally fused and which contains at least one nitrogen atom,

R^5 represents an optionally substituted aliphatic, araliphatic, aromatic or heteroaromatic radical,

X represents oxygen or sulphur and

M represents hydrogen or one equivalent of a metal, and of adducts of compounds of the formula (II) and strong acids.

2. Method of improving the crop plant tolerance of herbicidally active sulphonyliso(thio)urea derivatives of the formula (II) according to Claim 1, characterized in that amides of the formula (I) according to Claim 1 are allowed to act on the crop plants and/or their environment together with the sulphonyliso(thio)urea derivatives of the formula (II).

3. Agents for selectively combating weeds in crops of useful plants, characterized in that they contain an active compound combination consisting of

- an amide of the formula (I) according to Claim 1 and
- at least one herbicidal sulphonyliso(thio)urea derivative of the formula (II) according to Claim 1.

4. Amides as claimed in claim 3 in which

R represents hydrogen, fluorine, chlorine or

bromine; or represents the radical - CO - N $\begin{matrix} \diagup R^7 \\ \diagdown R^6 \end{matrix}$

wherein

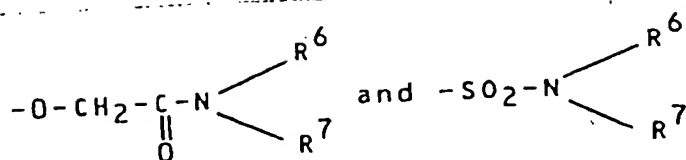
R⁶ and R⁷ are identical or different and each represent hydrogen, or represent in each case straight-chain or branched alkyl, alkenyl, alkynyl or cyanoalkyl with in each case up to 8 carbon atoms; or furthermore

R represents straight-chain or branched alkyl which has 1 to 20 carbon atoms and is optionally monosubstituted or polysubstituted by identical or different substituents, possible substituents being: hydroxyl, halogen, in particular fluorine, chlorine, bromine or iodine, cyano, cyanato and thiocyanato; in each case straight-chain or branched alkoxy, alkylthio, alkylcarbonyl, alkylcarbonyloxy, alkoxycarbonyl, halogenoalkoxy, halogeno-hydroxy-alkoxy, halogenoalkylcarbonyl, halogenoalkoxycarbonyl, halogenoalkylcarbonyloxy and halogenoalkenylcarbonyloxy with in each case up to 6 carbon atoms and if appropriate up to 9 identical or different halogen atoms;

and also phenyl, phenoxy, phenylthio and thienyl, in each case optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising halogen, lower alkyl and/or lower alkoxy; and furthermore cycloalkyl with 3 to 7

carbon atoms and the radicals $\begin{matrix} \diagup R^6 \\ -N \\ \diagdown R^7 \end{matrix}$, $\begin{matrix} \diagup R^6 \\ -C-N \\ || \quad \diagdown \\ O \quad R^7 \end{matrix}$

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wherein

R^6 and R^7 in each case have the abovementioned meanings; or furthermore

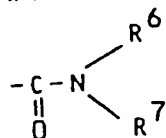
R represents straight-chain or branched alkenyl which has 2 to 8 carbon atoms and is optionally monosubstituted or polysubstituted by identical or different substituents, possible substituents being: hydroxyl, halogen,

straight-chain or branched alkoxy carbonyl with up to 6 carbon atoms and phenyl and phenoxy, in each case optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising halogen,

lower alkyl and lower alkoxy; or furthermore

R represents straight-chain or branched alkynyl with 2 to 8 carbon atoms; or furthermore

R represents cycloalkyl, cycloalkenyl, bicycloalkyl, bicycloalkenyl or tricycloalkyl with in each case up to 12 carbon atoms and in each case optionally monosubstituted or polysubstituted by identical or different substituents, possible substituents being: straight-chain or branched alkyl with 1 to 4 carbon atoms, phenyl and the radical



wherein

R^6 and R^7 have the abovementioned meaning; or furthermore

R represents aryl which has 6 to 10 carbon atoms and is optionally monosubstituted or polysubstituted by identical or different substituents,

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possible substituents being: halogen,

nitro,

carboxyl - also in the form of the carboxylate anion - in each case straight-chain or branched alkyl, alkoxy, halogenoalkyl, alkylcarbonyl, halogenoalkylcarbonyl and halogenoalkylcarbonylamino with in each case up to 4 carbon atoms and if appropriate up to 5 identical or different halogen atoms, in particular fluorine, chlorine or bromine,

and the radical $\text{-CO-N} \begin{array}{l} \text{R}^6 \\ \text{R}^7 \end{array}$

wherein

R^6 and R^7 have the abovementioned meaning, or furthermore

R represents furyl, thienyl, pyridyl or dithiolanyl, in each case optionally monosubstituted or polysubstituted by identical or different substituents, possible substituents being: halogen,

straight-chain or branched alkyl with up to 6

carbon atoms and the radical $\text{-CO-N} \begin{array}{l} \text{R}^6 \\ \text{R}^7 \end{array}$

wherein

R^6 and R^7 have the abovementioned meaning, or finally

R represents in each case straight-chain or branched alkoxy, alkenyloxy, alkynyloxy, alkoxy-carbonyl or phenoxy, in each case optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising phenyl and halogen,

R^1 and R^2 , which are identical or different, independently of one another, represent hydrogen,

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formyl or chlorosulphonyl, or represent phenyl, phenoxy or phenylsulphonyl, in each case optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising halogen,

and lower alkyl, or furthermore represent straight-chain or branched alkyl which has 1 to 12 carbon atoms and is optionally monosubstituted or polysubstituted by identical or different substituents, possible substituents being: hydroxyl, mercapto, cyano and halogen,

and in each case straight-chain or branched alkoxy, alkoximino, alkylcarbonyl, alkylcarbonyloxy, alkoxycarbonyl, alkoxycarbonyloxy, alkylthiocarbonyloxy, halogenoalkylcarbonyloxy and alkylsulphonyloxy with in each case up to 6 carbon atoms and, where appropriate, up to 5 identical or different halogen atoms.

; and furthermore alkylamino-carbonyloxy, dialkylaminocarbonyloxy, alkenylaminocarbonyloxy and dialkenylaminocarbonyloxy with in each case up to 6 carbon atoms in the individual straight-chain or branched alkyl or alkenyl parts; and furthermore cycloalkylaminocarbonyloxy with 3 to 7 carbon atoms in the cycloalkyl part, and phenylaminocarbonyloxy which is optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising halogen,

and lower alkyl, and furthermore cycloalkyl which has 3 to 7 carbon atoms and is optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising halogen,

and lower alkyl, phenyl which

is optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising nitro, halogen,

lower alkyl and dioxymethylene, furyl, tetrahydrofuryl, pyrazolyl, oxazolyl, isoxazolyl, thiazolyl, thiadiazolyl, oxadiazolyl, pyridyl and pyrimidinyl, in each case optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising halogen,

and lower alkyl, and amino which is optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising in each case lower alkyl, halogenoalkylcarbonyl, halogenophenoxyalkylcarbonyl and halogenoalkylcarbonylaminoalkyl; or furthermore

R^1 and R^2 represent straight-chain or branched alkenyl, alkadienyl or alkynyl with in each case 3 to 8 carbon atoms and in each case optionally monosubstituted or polysubstituted by identical or different substituents, possible substituents being: halogen,

cyano and in each case straight-chain or branched alkoxy, alkylcarbonyl and alkoxy-carbonyl with in each case up to 6 carbon atoms; or furthermore

R^1 and R^2 represent cycloalkyl or cycloalkenyl with in each case 3 to 8 carbon atoms and in each case optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising halogen,

and lower alkyl; or furthermore represent piperidyl, pyridyl, thienyl, oxazolyl, isoxazolyl, thiazolyl, oxadiazolyl, thiadiazolyl, fluorenyl, phthalimidoyl or dioxanylyl, in

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each case optionally monosubstituted or polysubstituted by identical or different substituents and/or benzo-fused, possible substituents being: halogen,

cyano and in each case straight-chain or branched alkyl and alkanediyl with in each case 1 to 4 carbon atoms; or furthermore

R^1 and R^2 represent in each case straight-chain or branched alkoxy, alkylthio, alkylcarbonyl, alkoxy carbonyl, halogenoalkylcarbonyl or halogenoalkoxy carbonyl with in each case up to 6 carbon atoms and, where appropriate, up to 5 identical or different halogen atoms;

or furthermore

R^1 and R^2 represent amino or alkylideneimino which is optionally monosubstituted or polysubstituted by identical or different substituents, possible substituents being: in each case straight-chain or branched alkyl, alkenyl, alkynyl, alkylcarbonyl and halogenoalkylcarbonyl with in each case up to 8 carbon atoms and, where appropriate, up to 5 identical or different halogen atoms;

or

R^1 and R^2 , together with the nitrogen atom to which they are bonded, represent alkylideneamino, pyrrolidinyl, piperidinyl, piperidonyl, perhydroazepinyl, perhydroazocinyl, dihydropyrazolyl, dihydro- or tetrahydropyridyl, azabicyclononyl, morpholinyl, perhydro-1,3-oxazinyl, 1,3-oxazolidinyl, 1,4-piperazinyl, perhydro-1,4-diazepinyl, dihydro-, tetrahydro- or perhydroquinolyl or -isoquinolyl, indolyl or dihydro- or perhydroindolyl, in each case optionally monosubstituted or polysubstituted by identical or different substituents, possible substituents being: hydroxyl, halogen

cyano and formyl; and in each case straight-chain or branched, where appropriate divalent alkyl, alkanediyl, alkoxy, dioxyalkylene, alkylcarbonyl, alkoxy carbonyl and halogenoalkylcarbonyl with in each case up to 8 carbon atoms, in each case straight-chain or branched alkylamino and dialkylamino with in each case up to 4 carbon atoms in the individual alkyl parts, phenyl, naphthyl, pyridyl and piperidinyl, in each case optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising halogen,

nitro and in each case lower alkyl, halogenoalkyl, alkoxy, alkylcarbonyl or alkoxy carbonyl, and straight-chain or branched cyclopropylalkyl, cyclohexylalkyl, piperidinylalkyl, phenylalkyl and phenylalkenyl with up to 4 carbon atoms in the particular alkyl or alkenyl parts and in each case optionally monosubstituted or polysubstituted by identical or different substituents from the group comprising halogen,

lower alkyl and halogenoalkylcarbonyl.

5. Amides as claimed in claim 3 in which

R represents hydrogen or chlorine; or furthermore

R represents the radical $\text{-CO-N} \begin{matrix} \text{R}^6 \\ \text{R}^7 \end{matrix}$

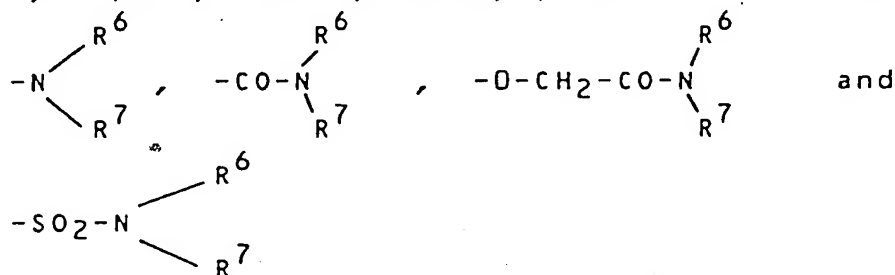
wherein

R^6 and R^7 are identical or different and independently of one another each represent hydrogen, methyl, ethyl, allyl, propargyl, but-1-in-3-yl, 3-methylbut-1-in-3-yl or 2-cyanoprop-2-yl; or furthermore

R represents straight-chain or branched alkyl with up to 15 carbon atoms; or furthermore

R represents straight-chain or branched halogeno-alkyl with 1 to 6 carbon atoms and 1 to 9 identical or different halogen atoms, or furthermore

R represents straight-chain or branched alkyl which has 1 to 6 carbon atoms and is mono-, di- or trisubstituted by identical or different substituents, possible substituents being: hydroxyl, fluorine, chlorine, bromine, cyano, cyanato, thiocyanato, methoxy, ethoxy, methylthio, ethylthio, acetyl, propionyl, acetoxyl, propionyloxy, methoxycarbonyl, ethoxycarbonyl, 1,1,3,3-tetrachloro-2-hydroxyprop-2-yloxy, 1,1,1,3,3-pentachloro-2-hydroxyprop-2-yloxy, chloroacetyl, dichloroacetyl, chloroacetoxyl, dichloroacetoxyl, pentachlorobutadien-1-ylcarbonyloxy and phenyl, phenoxy, phenylthio and thienyl, in each case optionally mono-, di- or trisubstituted by identical or different substituents from the group comprising chlorine, methyl and methoxy; and furthermore cyclopropyl, cyclopentyl and cyclohexyl; and the radicals



wherein

R^6 and R^7 are identical or different and in each case independently of one another represent hydrogen, methyl, ethyl, allyl, propargyl, but-1-in-3-yl, 3-methyl-but-1-in-3-yl or 2-cyanoprop-2-yl; or furthermore

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R represents straight-chain or branched alkenyl which has 2 to 5 carbon atoms and is mono-, di- or trisubstituted by identical or different substituents, possible substituents being: hydroxyl, fluorine, chlorine, bromine, methoxycarbonyl, ethoxycarbonyl and phenyl and phenoxy, in each case optionally mono-, di- or trisubstituted by identical or different substituents from the group comprising fluorine, chlorine, methyl and methoxy; or furthermore

R represents straight-chain or branched alkynyl with 2 to 5 carbon atoms; or furthermore

R represents cyclopropyl, cyclopentyl, cyclohexyl, cycloheptyl, cyclohexenyl, bicycloheptenyl, bicyclooctyl, bicyclononyl or tricyclodecyl, in each case optionally mono-, di-, tri-, tetra- or penta-substituted by identical or different substituents, possible substituents being: methyl, ethyl, phenyl

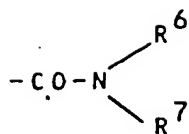
and the radical $\text{-CO-N} \begin{array}{l} \text{R}^6 \\ \text{R}^7 \end{array}$

wherein

R^6 and R^7 are identical or different and in each case independently of one another represent hydrogen, methyl, ethyl, allyl, propargyl, but-1-in-3-yl, 3-methylbut-1-in-3-yl or 2-cyanoprop-2-yl, or furthermore

R represents phenyl which is optionally mono-, di- or trisubstituted by identical or different substituents, possible substituents being: fluorine, chlorine, bromine, iodine, nitro, methyl, ethyl, methoxy, ethoxy, carboxyl - also in the form of the carboxylate anion -, trifluoromethyl, chloroacetamido, dichloroacetamido and the radical

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wherein

R^6 and R^7 are identical or different and in each case independently of one another represent hydrogen, methyl, ethyl, allyl, propargyl, but-1-in-3-yl, 3-methylbut-1-in-3-yl or 2-cyanoprop-2-yl; or furthermore

R represents furyl, thienyl, pyridyl or dithiolanyl, in each case optionally mono-, di- or trisubstituted by identical or different substituents, possible substituents being: chlorine, methyl,



wherein

R^6 and R^7 are identical or different and in each case independently of one another represent hydrogen, methyl, ethyl, allyl, propargyl, but-1-in-3-yl, 3-methylbut-1-in-3-yl or 2-cyanoprop-2-yl; or finally

R represents methoxy, ethoxy, allyloxy, propargyloxy, butinyloxy, methoxycarbonyl, ethoxycarbonyl or phenyl, in each case optionally mono-, di- or trisubstituted by identical or different substituents from the group comprising fluorine, chlorine, bromine and phenyl, and

R^1 and R^2 , which are identical or different, independently of one another represent hydrogen, formyl or chlorosulphonyl, or represent phenyl, phenoxy or phenylsulphonyl, in each case optionally mono-, di- or trisubstituted by identical or different substituents from the group comprising fluorine, chlorine, bromine or methyl; or furthermore represent straight-chain or branched alkyl

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which has 1 to 8 carbon atoms and is optionally mono-, di- or trisubstituted by identical or different substituents, possible substituents being: hydroxyl, mercapto, cyano, fluorine, chlorine, bromine, methoxy, ethoxy, propoxy, butoxy, methoximino, ethoximino, acetyl, propionyl, acetoxyl, propionyloxy, methoxycarbonyl, ethoxycarbonyl, methoxycarbonyloxy, ethoxycarbonyloxy, methylthiocarbonyloxy, ethylthiocarbonyloxy, chloroacetoxyl, dichloroacetoxyl, methylsulphonyloxy, ethylsulphonyloxy, methylaminocarbonyloxy, dimethylaminocarbonyloxy, ethylaminocarbonyloxy, diethylaminocarbonyloxy, propylaminocarbonyloxy, butylaminocarbonyloxy, allylaminocarbonyloxy, diallylaminocarbonyloxy and cyclohexylaminocarbonyloxy, and phenylaminocarbonyloxy which is optionally mono-, di- or trisubstituted by identical or different substituents from the group comprising chlorine and methyl; and furthermore cyclopropyl, cyclopentyl, cyclohexyl and cycloheptyl, in each case optionally mono-, di-, tri-, tetra- or penta-substituted by identical or different substituents from the group comprising chlorine and methyl; and phenyl which is optionally mono-, di- or trisubstituted by identical or different substituents from the group comprising nitro, fluorine, chlorine, bromine, methyl and dioxymethylene, and furyl, tetrahydrofuryl, pyrazolyl, oxazolyl, isoxazolyl, thiazolyl, thiadiazolyl, oxadiazolyl, pyridyl and pyrimidinyl, in each case optionally mono- or disubstituted by identical or different substituents from the group comprising methyl, ethyl, propyl and chlorine; and amino which is optionally monosubstituted or disubstituted by identical or different substituents from the group comprising methyl, ethyl, chloroacetyl, dichloro-

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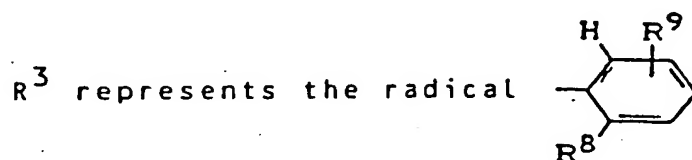
acetyl, chlorophenoxyacetyl, dichloroacetamido-
methyl and dichloroacetamidoethyl; or furthermore
R¹ and R² represent straight-chain or branched
alkenyl, alkadienyl or alkinyl with in each case
3 to 5 carbon atoms and in each case optionally
monosubstituted or disubstituted by identical or
different substituents from the group comprising
chlorine, methoxy, ethoxy, acetyl, methoxycarbon-
yl, ethoxycarbonyl or cyano; or furthermore
R¹ and R² represent cyclopropyl, cyclopentyl,
cyclohexyl, cyclohexenyl or cyclooctyl, in each
case optionally mono-, di-, tri-, tetra- or penta-
substituted by identical or different substituents
from the group comprising chlorine and methyl; or
furthermore
R¹ and R² represent piperidyl, pyridyl,
thienyl, oxazolyl, isoxazolyl, thiadiazolyl,
fluorenyl, phthalimidoyl or dioxanyl, in each case
optionally mono-, di- or trisubstituted by iden-
tical or different substituents from the group
comprising fluorine, chlorine, bromine, cyano,
methyl, ethyl, propyl, propanediyl and butanediyl
and/or benzo-fused; or furthermore
R¹ and R² represent methoxy, ethoxy, propoxy,
butoxy, methylthio, ethylthio, propylthio, butyl-
thio, acetyl, chloroacetyl, dichloroacetyl,
methoxycarbonyl, ethoxycarbonyl, chloroethoxycar-
bonyl or bromoethoxycarbonyl, and furthermore
R¹ and R² represent amino or propylideneimino,
optionally monosubstituted or disubstituted by
identical or different substituents from the group
comprising methyl, ethyl, allyl, propargyl,
acetyl, chloroacetyl and dichloroacetyl, or
R¹ and R², together with the nitrogen atom to
which they are bonded, represent methylideneimino,
ethylideneimino, propylideneimino, pyrrolidinyl,

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piperidinyl, piperidonyl, perhydroazepinyl, perhydroazocinyl, dihydropyrazolyl, dihydro- or tetrahydropyridyl, azabicyclononyl, morpholinyl, perhydro-1,3-oxazinyl, 1,3-oxazolidinyl, 1,4-piperazinyl, perhydro-1,4-diazepinyl, dihydro-, tetrahydro- or perhydroquinolyl or -isoquinolyl, indolyl or dihydro- or perhydroindolyl, in each case optionally mono-, di-, tri-, tetra- or penta-substituted by identical or different substituents, possible substituents being: hydroxyl, fluorine, chlorine, bromine, cyano, formyl, methyl, ethyl, propyl, butyl, ethanediyl, propanediyl, methoxy, ethoxy, propoxy, butoxy, dioxyethylene, dioxypropylene, dioxybutylene, acetyl, propionyl, chloroacetyl, dichloroacetyl, α -chloropropionyl, methoxycarbonyl, ethoxycarbonyl, methylamino, ethylamino, dimethylamino, diethylamino and phenyl, naphthyl or piperidinyl, in each case optionally mono-, di- or trisubstituted by identical or different substituents from the group comprising fluorine, chlorine, bromine, nitro, methyl, ethyl, methoxy, ethoxy, trifluoromethyl, acetyl, propionyl, methoxycarbonyl and ethoxycarbonyl, and cyclopropylmethyl, cyclohexylmethyl, piperidinylethyl, piperidinylpropyl, benzyl, phenylethyl and phenylpropenyl, in each case optionally mono-, di- or trisubstituted by identical or different substituents from the group comprising chlorine, methyl, chloroacetyl and dichloroacetyl.

6. Any new compound substantially as herein described and exemplified in any one of the examples in table 1.

7. Herbicidal sulphonyliso (thio) urea derivatives as claimed in claim 3 in which



wherein

R^8 and R^9 are identical or different and represent hydrogen, halogen

25

cyano,

nitro or C_1 - C_6 -alkyl [which is optionally substituted by fluorine, chlorine, bromine, cyano, carboxyl, C_1 - C_4 -alkoxycarbonyl, C_1 - C_4 -alkyl-

amino-carbonyl, di- $(C_1$ - C_4 -alkyl)-amino-carbonyl,

30

hydroxyl, C_1 - C_4 -alkoxy, formyloxy, C_1 - C_4 -alkyl-carbonyloxy, C_1 - C_4 -alkoxy-carbonyloxy, C_1 - C_4 -alkylamino-carbonyloxy, C_1 - C_4 -alkylthio, C_1 - C_4 -

alkylsulphinyl, C₁-C₄-alkylsulphonyl, di-
(C₁-C₄-alkyl)-aminosulphonyl, C₃-C₆-cycloalkyl
or phenyl], or represent C₂-C₆-alkenyl [which is
optionally substituted by fluorine, chlorine,
bromine, cyano, C₁-C₄-alkoxycarbonyl, carboxyl
or phenyl], or represent C₂-C₆-alkinyl [which is
optionally substituted by fluorine, chlorine,
bromine, cyano, C₁-C₄-alkoxy-carbonyl, carboxyl
or phenyl], or represent C₁-C₄-alkoxy [which is
optionally substituted by fluorine, chlorine,
bromine, cyano, carboxyl, C₁-C₄-alkoxyimino-
C₁-C₄-alkyl, C₁-C₄-alkoxy-carbonyl, C₁-C₄-
alkoxy, C₁-C₄-alkylthio, C₁-C₄-alkylsulphinyl
or C₁-C₄-alkylsulphonyl], or represent C₁-C₄-
alkylthio [which is optionally substituted by
fluorine, chlorine, bromine, cyano, carboxyl,
C₁-C₄-alkoxycarbonyl, C₁-C₄-alkylthio,
C₁-C₄-alkylsulphinyl or C₁-C₄-alkylsulphonyl],
or represent C₃-C₆-alkenyloxy [which is option-
ally substituted by fluorine, chlorine, bromine,
cyano or C₁-C₄-alkoxy-carbonyl], or represent
C₂-C₆-alkenylthio [which is optionally substi-
tuted by fluorine, chlorine, bromine, cyano, nitro,
C₁-C₃-alkylthio or C₁-C₄-alkoxycarbonyl],
C₃-C₆-alkinyloxy or C₃-C₆-alkinylthio, or
represent the radical -S(O)_p-R¹⁰,

wherein

p represents the number 1 or 2 and

R¹⁰ represents C₁-C₄-alkyl [which is optionally
substituted by fluorine, chlorine, bromine, cyano
or C₁-C₄-alkoxy-carbonyl], C₃-C₆-alkenyl,
C₃-C₆-alkinyl, C₁-C₄-alkoxy, C₁-C₄-alkoxy-
amino, C₁-C₄-alkoxy-C₁-C₄-alkylamino, C₁-
C₄-alkylamino or di(C₁-C₄-alkyl)-amino,
or furthermore

R⁸ and R⁹ represent phenyl or phenoxy, or represent

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C₁-C₄-alkylcarbonylamino, C₁-C₄-alkoxycarbonyl-
amino, C₁-C₄-alkylamino-carbonylamino, di-
(C₁-C₄-alkyl)-amino-carbonylamino, or represent
the radical -CO-R¹¹,

5 wherein

R¹¹ represents C₁-C₆-alkyl, C₁-C₆-alkoxy,
C₁-C₄-alkoxyimino-C₁-C₄-alkoxy, C₃-C₆-
cycloalkoxy, C₃-C₆-alkenyloxy, C₁-C₄-alkyl-
thio, C₁-C₄-alkylamino, C₁-C₄-alkoxyamino,
10 C₁-C₄-alkoxy-C₁-C₄-alkyl-amino or di-(C₁-C₄-
alkyl)amino [which are optionally substituted by
fluorine and/or chlorine], or furthermore
R⁸ and R⁹ represent C₁-C₄-alkylsulphonyl-
C₁-C₄-alkylsulphonyloxy, di-(C₁-C₄-alkyl)-
15 aminosulphonylamino or represent the radical
-CH=N-R¹²,

wherein

R¹² represents C₁-C₆-alkyl which is optionally
substituted by fluorine, chlorine, cyano, carboxyl,
20 C₁-C₄-alkoxycarbonyl, C₁-C₄-alkylthio, C₁-C₄-
alkylsulphonyl or C₁-C₄-alkylsulphonyl, or
represents benzyl which is optionally substituted
by fluorine or chlorine, or represents C₃-C₆-
alkenyl or C₃-C₆-alkinyl which is optionally
25 substituted by fluorine or chlorine, or represents
phenyl which is optionally substituted by fluorine,
chlorine, bromine, C₁-C₄-alkyl, C₁-C₄-alkoxy,
trifluoromethyl, trifluoromethoxy or trifluoro-
methylthio, or represents C₁-C₆-alkoxy, C₃-C₆-
30 alkenoxy, C₃-C₆-alkinoxy or benzyloxy which is
optionally substituted by fluorine and/or chlorine,
or represents amino, C₁-C₄-alkylamino, di-
(C₁-C₄-alkyl)amino, phenylamino, C₁-C₄-alkyl-
carbonyl-amino, C₁-C₄-alkoxy-carbonylamino, or
35 C₁-C₄-alkyl-sulphonylamino, or represents
phenylsulphonylamino which is optionally substitu-

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ted by fluorine, chlorine, bromine or methyl;
and wherein, furthermore,



wherein

5 R^{13} represents hydrogen or C₁-C₄-alkyl and
 R^{14} and R^{15} are identical or different and represent hydrogen, fluorine, chlorine, bromine, nitro,
cyano, C₁-C₄-alkyl [which is optionally substituted by fluorine and/or chlorine], C₁-C₄-
10 alkoxy [which is optionally substituted by fluorine and/or chlorine], carboxyl, C₁-C₄-alkoxy-carbonyl, C₁-C₄-alkylsulphonyl or di-(C₁-C₄-alkyl)-aminosulphonyl;

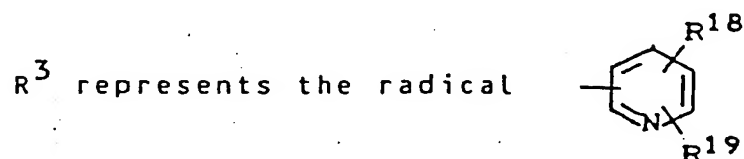
or wherein, furthermore,



wherein

R^{16} and R^{17} are identical or different and represent hydrogen, fluorine, chlorine, bromine, nitro,
cyano, C₁-C₄-alkyl [which is optionally substituted by fluorine and/or chlorine] or C₁-C₄-
20 alkoxy [which is optionally substituted by fluorine and/or chlorine];

or wherein, furthermore,



25 wherein

R^{18} and R^{19} are identical or different and represent hydrogen, fluorine, chlorine, bromine, nitro,
cyano, C₁-C₄-alkyl [which is optionally substituted by fluorine and/or chlorine];

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stituted by fluorine and/or chlorine] or C₁-C₄-alkoxy [which is optionally substituted by fluorine and/or chlorine], or represent C₁-C₄-alkylthio, C₁-C₄-alkylsulphinyl or C₁-C₄-alkylsulphonyl [which are optionally substituted by fluorine and/or chlorine], or represent di-(C₁-C₄-alkyl)-amino-sulphonyl or C₁-C₄-alkoxy-carbonyl;
or wherein, furthermore,



10 wherein

R²⁰ and R²¹ are identical or different and represent hydrogen, fluorine, chlorine, bromine, C₁-C₄-alkyl [which is optionally substituted by fluorine and/or bromine] or C₁-C₄-alkoxy [which is optionally substituted by fluorine and/or chlorine], or represent C₁-C₄-alkylthio, C₁-C₄-alkylsulphinyl or C₁-C₄-alkylsulphonyl [which are optionally substituted by fluorine and/or chlorine], or represent di-(C₁-C₄-alkyl)-amino-sulphonyl;

or wherein, furthermore,



wherein

R²² and R²³ are identical or different and represent hydrogen, fluorine, chlorine, bromine, cyano, nitro, C₁-C₄-alkyl [which is optionally substituted by fluorine and/or chlorine], C₁-C₄-alkoxy [which is optionally substituted by fluorine and/or chlorine], C₁-C₄-alkylthio, C₁-C₄-alkylsulphinyl or C₁-C₄-alkylsulphonyl [which is option-

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ally substituted by fluorine and/or chlorine], di-(C₁-C₄-alkyl)-amino-sulphonyl or C₁-C₄-alkoxy-carbonyl and

Z represents oxygen, sulphur or the grouping N-Z¹,

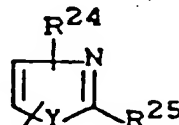
5 wherein

Z¹ represents hydrogen, C₁-C₄-alkyl [which is optionally substituted by fluorine, chlorine, bromine or cyano], C₃-C₆-cycloalkyl, benzyl, phenyl [which is optionally substituted by fluorine, chlorine, bromine or nitro], C₁-C₄-alkyl-carbonyl, C₁-C₄-alkoxy-carbonyl or di-(C₁-C₄-alkyl)-amino-carbonyl;

10

or wherein, furthermore,

R³ represents the radical



15 wherein

R²⁴ represents hydrogen, C₁-C₅-alkyl or halogen,

R²⁵ represents hydrogen or C₁-C₅-alkyl and

Y represents sulphur or the grouping N-R²⁶,

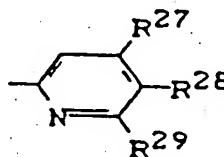
wherein

20

R²⁶ represents hydrogen or C₁-C₅-alkyl;

and wherein, furthermore,

R⁴ represents the radical



wherein

R²⁷ and R²⁹ are identical or different and represent hydrogen, fluorine, chlorine, bromine, C₁-C₄-alkyl [which is optionally substituted by fluorine and/or chlorine] or C₁-C₄-alkoxy [which is optionally substituted by fluorine and/or chlorine],

25

with the proviso that at least one of the radicals

30

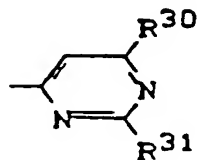
R²⁷ and R²⁹ is other than hydrogen, and

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R²⁸ represents hydrogen, fluorine, chlorine, bromine, cyano or C₁-C₄-alkyl [which is optionally substituted by fluorine and/or chlorine]; or wherein, furthermore,

5

R⁴ represents the radical

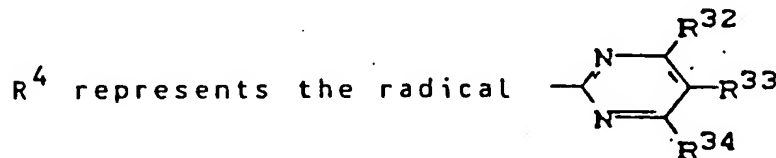


wherein

10

R³⁰ and R³¹ are identical or different and represent hydrogen, fluorine, chlorine, bromine, C₁-C₄-alkyl [which is optionally substituted by fluorine and/or chlorine], C₁-C₄-alkoxy [which is optionally substituted by fluorine and/or chlorine], C₁-C₄-alkylamino or di-(C₁-C₄-alkyl)-amino, with the proviso that at least one of the radicals R³⁰ and R³¹ is other than hydrogen;

15 or wherein, furthermore,



wherein

20

R³² represents hydrogen, fluorine, chlorine, bromine, hydroxyl or C₁-C₄-alkyl [which is optionally substituted by fluorine and/or chlorine] or C₁-C₄-alkoxy [which is optionally substituted by fluorine and/or chlorine],

25

R³³ represents hydrogen, fluorine, chlorine, bromine, C₁-C₄-alkyl [which is optionally substituted by fluorine and/or chlorine], cyano, formyl, C₁-C₄-alkyl-carbonyl or C₁-C₄-alkoxy-carbonyl and

R³⁴ represents hydrogen, fluorine, chlorine,

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bromine, hydroxyl, C₁-C₄-alkyl [which is optionally substituted by fluorine and/or chlorine], C₁-C₄-alkoxy [which is optionally substituted by fluorine and/or chlorine], amino, C₁-C₄-alkyl-amino or di-(C₁-C₄-alkyl)-amino, or R³³ and R³⁴ together represent C₃-C₄-alkane-diyl;

or wherein, furthermore,



10 wherein

R³⁵ and R³⁶ are identical or different and represent fluorine, chlorine, bromine, hydroxyl, C₁-C₄-alkyl [which is optionally substituted by fluorine and/or chlorine], C₃-C₅-cycloalkyl, C₁-C₄-alkoxy [which is optionally substituted by fluorine and/or chlorine] or C₁-C₄-alkylthio, or represent C₁-C₄-alkyl-amino or di-(C₁-C₄-alkyl)-amino;

and wherein, furthermore,



wherein

R³⁷ and R³⁸ are identical or different and represent hydrogen, methyl or methoxy;

and wherein, furthermore,

25 R⁵ represents C₁-C₁₂-alkyl [which is optionally substituted by fluorine, chlorine, cyano, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₁-C₄-alkylsulphinyl, C₁-C₄-alkylsulphonyl, C₁-C₄-alkyl-carbonyl, C₁-C₄-alkoxy-carbonyl, C₁-C₄-alkylaminocarbonyl or di-(C₁-C₄-alkyl)-aminocarbonyl], or repres-

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ents C₃-C₆-alkenyl, C₃-C₆-alkinyl, C₃-C₆-
cycloalkyl, C₃-C₆-cycloalkyl-C₁-C₂-alkyl or
phenyl-C₁-C₂-alkyl [which is optionally sub-
stituted in the phenyl part by fluorine, chlorine,
5 nitro, cyano, C₁-C₄-alkyl, C₁-C₄-alkoxy or
C₁-C₄-alkoxy-carbonyl],
or wherein, furthermore,
R⁵ represents a phenyl radical which is optionally
substituted by one or more radicals from the
10 series comprising halogen [such as, in particular,
fluorine, chlorine, bromine and iodine], cyano,
nitro, hydroxy, carboxy, C₁-C₆-alkyl [which is
optionally substituted by fluorine, chlorine,
bromine, nitro, cyano, hydroxyl, carboxyl, C₁-C₄-
15 alkoxy-carbonyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio
or phenyl], C₃-C₆-cycloalkyl, C₁-C₄-alkoxy
[which is optionally substituted by fluorine,
chlorine, bromine, cyano, carboxy, C₁-C₄-alkoxy,
C₁-C₄-alkylthio or C₁-C₄-alkoxy-carbonyl],
20 C₁-C₄-alkylthio [which is optionally substituted
by fluorine, chlorine, bromine, cyano, carboxyl,
or C₁-C₄-alkoxy-carbonyl], amino, C₁-C₄-alkyl-
amino and di-(C₁-C₄-alkyl)-amino [which are
optionally substituted by fluorine, chlorine,
25 bromine, cyano, carboxyl, C₁-C₄-alkoxy or C₁-C₄-
alkoxy-carbonyl], C₁-C₄-alkyl-carbonylamino,
C₁-C₄-alkoxy-carbonylamino, (di)-C₁-C₄-alkyl-
amino-carbonyl-amino, formyl, C₁-C₄-alkyl-
carbonyl, benzoyl, C₁-C₄-alkoxy-carbonyl,
30 phenoxy-carbonyl, benzyloxycarbonyl, phenyl [which
is optionally substituted by fluorine, chlorine,
bromine, cyano, nitro, hydroxyl or methyl], phenoxy,
phenylthio, phenylsulphonyl, phenylamino and
phenylazo [which are optionally substituted by
35 fluorine, chlorine, bromine, cyano, nitro, methyl
and/or trifluoromethyl], pyridoxy and pyrimidoxy

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[which are optionally substituted by fluorine, chlorine, bromine, cyano, nitro, methyl and/or trifluoromethyl], C₁-C₄-alkyl-carbonyloxy, C₁-C₄-alkoxy-carbonyloxy, C₁-C₄-alkyl-amino-carbonyloxy and di-(C₁-C₄-alkyl)-amino-carbonyloxy, or which is optionally fused by an alkylene chain [which is optionally branched and/or interrupted by one or more oxygen atoms] or a benzo radical [which is optionally substituted by fluorine, chlorine, bromine, cyano, nitro, methyl and/or trifluoromethyl];

or wherein, furthermore,

R⁵ represents a five- or six-membered hetero-aromatic ring which contains 1 to 3 nitrogen atoms and/or an oxygen or sulphur atom and which is optionally benzo-fused and/or substituted by fluorine, chlorine, bromine, cyano, nitro, C₁-C₃-alkyl or C₁-C₃-alkoxy [the latter being optionally substituted by fluorine and/or chlorine];

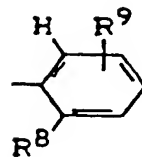
and wherein, furthermore,

X represents oxygen or sulphur and

M represents hydrogen or one equivalent of sodium, potassium, magnesium, calcium, aluminium, manganese, iron, cobalt or nickel.

8. Herbicidal sulphonyliso (thio) urea derivatives as claimed in claim 3 in which

R^3 represents the radical

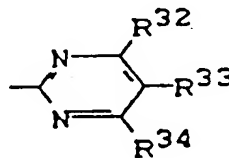


wherein

R^8 represents fluorine, chlorine, bromine, methyl, trifluoromethyl, methoxy, difluoromethoxy, trifluoromethoxy, C₁-C₃-alkylthio, difluoromethylthio, trifluoromethylthio, C₁-C₃-alkylsulphinyl, C₁-C₃-alkylsulphonyl, dimethylaminosulphonyl, diethylaminosulphonyl, N-methoxy-N-methylaminosulphonyl, phenyl, phenoxy, C₁-C₃-alkoxy-carbonyl or C₁-C₃-alkyl-aminocarbonyl and R^9 represents hydrogen;

and wherein, furthermore,

R^4 represents the radical



wherein

R^{32} represents hydrogen, fluorine, chlorine, bromine, hydroxyl, C₁-C₃-alkyl, C₁-C₃-alkoxy or difluoromethoxy,

R^{33} represents hydrogen, chlorine, bromine or methyl and

R^{34} represents C₁-C₃-alkyl, hydroxy, fluorine, chlorine, bromine or C₁-C₃-alkoxy;

and wherein, furthermore,

R^5 represents C₁-C₈-alkyl [which is optionally substituted by fluorine, chlorine, cyano, C₁-C₂-alkoxy or C₁-C₂-alkoxy-carbonyl], or represents C₃-C₄-alkenyl, C₃-C₄-alkinyl or benzyl [which is optionally substituted in the phenyl part by fluorine, chlorine, nitro, cyano, methyl, methoxy or C₁-C₂-alkoxycarbonyl], or

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5 R^5 represents a phenyl radical, which is optionally substituted by one or two radicals from the series comprising fluorine, chlorine, bromine, iodine, cyano, nitro, hydroxyl, carboxyl, C₁-C₃-alkoxy-carbonyl, C₁-C₄-alkyl, trifluoromethyl, hydroxymethyl, methoxycarbonylmethyl, phenyl-C₁-C₃-alkyl, cyclohexyl, C₁-C₃-alkoxy, trifluoromethoxy, C₁-C₃-alkylthio, trifluoromethylthio, dimethylamino, amino, acetylamino, methylamino-carbonyl, formyl, acetyl, benzoyl, phenyl, hydroxy-phenyl, phenoxy [which is optionally substituted by chlorine and/or trifluoromethyl], phenylamino, phenylazo and pyridoxy [which is optionally substituted by chlorine and/or trifluoromethyl], or
10 which is optionally benzo-fused;

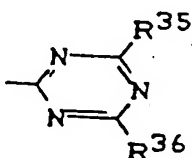
15 and wherein, furthermore,

X represents oxygen or sulphur and

M represents hydrogen or one equivalent of sodium, potassium or calcium;

20 or wherein, furthermore,

(B) R^3 , R^5 , X and M have the meaning given above under (A) and


R^4 represents the radical 

wherein

25 R^{35} represents fluorine, chlorine, cyclopropyl, C₁-C₂-alkyl, C₁-C₂-alkoxy or C₁-C₂-alkyl-thio and

30 R^{36} represents fluorine, chlorine, cyclopropyl, C₁-C₂-alkyl, C₁-C₂-alkoxy, C₁-C₂-alkyl-amino or di-(C₁-C₂-alkyl)-amino.

9. Any new compound substantially as herein described and exemplified in any one of the examples in table 2.
10. Method of selectively combating weeds in crops of useful plants, characterized in that an active compound combination according to any one of Claims 3 to 9 is allowed to act on the weeds or their environment.
11. Use of an active compound combination according to any one of Claims 3 to 9 for selectively combating weeds in crops of useful plants.
12. Process for the preparation of agents for selectively combating weeds in crops of useful plants, characterized in that active compound combinations according to any one of Claims 3 to 9 are mixed with extenders and/or surface-active agents.



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